FEDCO

SEEDS & SUPPLIES

2019

FEDCO·SEEDS

Garden · Farm · Orchard

Welcome to Fedco's 41st Year

As we move into our fifth decade, Fedco remains a small cooperative in a landscape of increasingly larger mergers and consolidations. Against this backdrop, we take pride in providing a diverse selection of proven varieties to serve the needs of short-season gardeners. In order to do so we rely on a knowledgable and steadfast cadre of people. Some are farmers; some are gardeners, but all have dedicated themselves to growing seed—putting a seed in the ground and tending it through the full cycle of growth until a new generation of seeds is harvested.

Fedco's commitment to this process began in the early '90s when, in an early round of consolidations, Moira tomato was suddenly dropped from commerce because it was not widely adaptable and the company wanted to sell only varieties it could sell everywhere. It was, however, a very good variety for the north—and one of our top sellers. We fumed over this loss until someone suggested that, since it was open-pollinated, *we* could grow it for ourselves. So we did. We enlisted one of our reliable trailers, Jeanne Griffin, to make the leap into growing seed.

We've never looked back. We now have almost 75 seed growers, some of whom grow only one variety and some who make a substantial portion of their income from growing seed. This expansion on our part has come about to keep varieties in commerce, to make varieties more widely available, and to increase the options for organic seed.

People grow seeds for a number of reasons—because they remember and cherish a variety; for ethnic and cultural comfort; as part of a vision; for spiritual, economic and nutritional reasons; for self-reliance and sovereignty. Nestled in these pages you will find some "Gleanings from Our Seed Growers" that will give you a sense of who they are as well as expressing a bit of why they grow seed. Through it all comes a strong sense of purpose, of commitment, of persistence despite the failures and frustrations. We write about a few of the hardworking people who grow seed for us: resilient, honest, persistent people who also, of necessity, have a sense of humor and perspective. Every day, I am grateful for their part in the work we do together.

–Nikos Kavanya

CONTACT INFORMATION

Fedco Facilitation

phone: (207) 426-9900

email: questions@fedcoseeds.com

Phone hours: January–mid-May: Mon–Fri, 9am–4pm.
Mid-May–December: Tues, Weds, Thurs, 9am–3pm.

Contact us to:
- Get answers to ordering questions.
- Receive freight quotes and prices for bulk quantities.
- Resolve problems.
- Report seed quality issues. Be prepared with your order number, variety name, packet size bought, lot number if available, what went wrong.

Request a catalog: (207) 426-0090

Visit our Website: fedcoseeds.com

- To order online.
- download order forms and catalogs.
- get up-to-date information on backorders and out-of-stocks for all divisions.
- access online specials that arrived too late to make the catalog.
- see photos of many of our cultivars.
- access additional info and articles from previous catalogs.
- place orders to Canada.

How to Order

Order online at **fedcoseeds.com**.
Or mail your order to **Fedco Seeds, PO Box 520, Clinton, ME 04927**.
All orders must include check, money order, or Visa, MasterCard, Discover or American Express info.
Each division has its own shopping cart/order form.
Detailed ordering information and forms:
Seeds, see pages 108, 109.
Potatoes pages 111, 115.
Organic Growers Supply, pages 113, 115.

Alphabetization Alert!

ABCderians Rejoice!

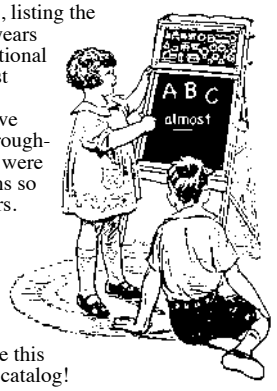
NEW! this year, we've rearranged our catalog, listing the vegetable categories alphabetically. Over the years many people have requested this more conventional arrangement. Within each category, we still list varieties by days to maturity.

Most item numbers remain the same so we've included page numbers with our references throughout to help you find things. Herbs and flowers were already arranged alphabetically in their sections so they still appear with consecutive item numbers.

We have a comprehensive **index on the back cover**.

A bit of Fedco history appears on page 75 for anyone who is curious about our previous arrangement.

We hope that alphabetization will help you make your selections, or at least that you'll like this change better than you did last year's flipping catalog!



Catalog Credits

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None of our seed is fungicide-treated.

We ship seeds to Canada! Visit our website for details.

Where is Everything?

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Ordering information

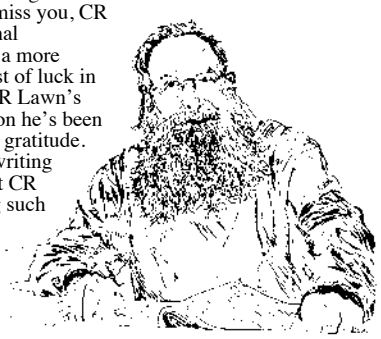
Fedco Division	Goods offered	Order form	Discount deadline	Ordering deadline	Shipments
Seeds	vegetables, flowers, herbs	p. 109	none	October 31	begin January 2
Tubers, Onions	seed potatoes, onion sets	p. 111	none	April 8	early April–early May
& Exotics	ginger, turmeric, sweet potato	p. 111	none	Feb. 25	begin early March
Organic Growers Supply	soil amendments, cover crops, tools, supplies & books	p. 113	none	none	year-round

Our **Fedco Trees** catalog, available in October, lists fruit trees, berry bushes, ornamentals, perennials and tender bulbs.
Our **Fedco Bulbs** catalog, available in June, lists fall-planted flowerbulbs and garlic. Call or email us to request these.

More Tributes to CR Lawn

After last year's catalog announced that our founder CR Lawn was retiring the tributes poured in. Here's a sample:

How are you going to replace the Warren Buffett of Fedco? Big shoes to fill indeed! • Thanks Fedco! Thanks CR Lawn for a working life well lived! • Thanks to CR for his vision for FEDCO. Happy retirement! • Hope the catalog doesn't end up too dry without CR around, thanks so much. • Congratulations to CR Lawn on a great career! Best of luck to the new leadership of FEDCO. • We'll miss you, CR Lawn! Thanks for your intentional contributions to make the world a more beautiful bountiful place and best of luck in your next endeavors! • I miss CR Lawn's commentary! What an inspiration he's been for me! Please pass on my deep gratitude. • Fedco is the best—and CR's writing may be sorely missed! • Dearest CR Lawn, Thank you for cultivating such magic over these years. Your passion, ethos, and wild sense of the world has spread beyond the Fedco pages and taken root in our hearts. • Thanks to CR Lawn and the rest of the Fedco seed folks for providing growers with years of quality and passion for fighting the good fight! • Thank you for 40 years of seed wisdom. • I am really going to miss CR. I want to wish him well and thank him for all his wit, humor and above all his dedication. • CR Lawn is our hero. • Thanks to CR for years of creativity and dedication! • Good Luck CR Lawn in your next endeavor!



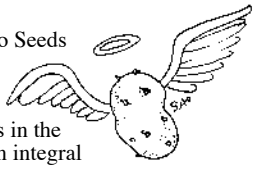
New Commons Project Special Events

UMaine Farmington's New Commons Project selected the Fedco Seeds catalog (1978-present) as one of 12 works chosen as part of a "cultural commons" for the people of Maine! Thanks to consumer board member Jo Josephson for nominating us!

The tentative schedule for March and April 2019 includes exhibits of catalogs in Farmington and Phillips, a talk by CR Lawn on "The Seed Commons," and a showing of the award-winning film "SEED: The Untold Story."

For more information, and to see the schedule as it develops, visit newcommonsproject.org; to see all the winners, visit vimeo.com/263437027.

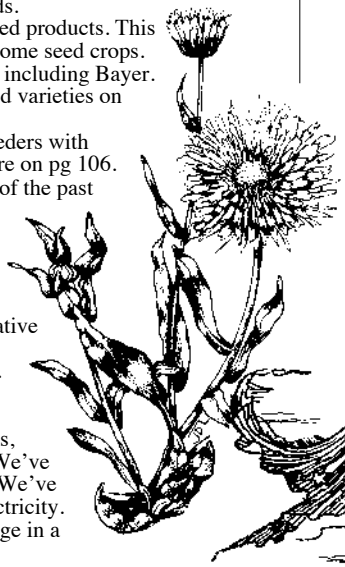
Fedco Ethics



More than 40 years ago, CR Lawn started Fedco Seeds as a project of Maine's **Fed**eration of **Co**operatives. Early on, we structured ourselves as a worker-consumer cooperative. We share ownership and profits. This has put us in the vanguard of companies that include values as an integral part of business.

Our guiding ethics are expressed through:

- Our goal of offering diverse and high-quality seed at a fair price.
- Our democratic and cooperative structure. We support cooperation through volume discounts, group orders and OGS depots.
- Transparency. Our honest descriptions include supplier codes.
- Our refusal to sell fungicide-treated seeds.
- Our refusal to offer genetically engineered products. This includes our proactive GMO testing of some seed crops.
- Our boycott of Monsanto products, now including Bayer.
- Our rejection of trait- and utility-patented varieties on principle.
- Our support for independent farmer-breeders with voluntary royalties, indicated by **BR**, more on pg 106.
- Our recognition of indigenous breeding of the past though royalties we currently pay to Nibezun. **IR**, pg 106.
- Our commitment to the Seed Commons and our membership in OSSI, more on pg 107.
- Our promotion of education and cooperative principles, especially through our distribution of Education Subsidy funds.
- Our support of organic, ecological, small-scale and local seed production.
- Our support for agricultural communities, small economies and the environment. We've completed a 5-year pledge to MOFGA. We've installed solar panels to produce our electricity.
- Providing our workers with a livable wage in a humane working environment.



New Seed Varieties for 2019

page	item	
7	283	Monte Gusto bean: If you don't have gusto, please exit the bean patch!
10	2152	Eagle beet: High-flying summer performance!
12	3328	Burgundy non-heading broccoli: A sun-kissed vintage!
17	3412	Flame Star cauliflower: A stellar head for the oven's fire!
22	1335	Longfellow cucumber: "This cuke of mine/ Is a Song of the vine."
24	3679	Annina eggplant OG: Shares a name with Heron's niece!
29	3092	Full Heart Batavian endive: Overflowing with tender feelings!
31	3195	Turkish Rocket: Turkish delight!
34	3465	Dazzling Blue kale OG: The kale patch just got even snazzier!
35	3470	Konan kohlrabi: Barbarically good!
38	2763	Elf Ears Oak lettuce OG: Great for Middle Earth gardens!
39	2815	Optima lettuce OG: Optimize your butterhead enjoyment!
40	2855	Jadeite lettuce OG: Carve out your mini-salad!
41	2713	Gildenstern lettuce OG: No duplicity with this mini-iceberg!
41	2924	Crispino lettuce OG: 'Cause like, it's crispy… 'n stuff.
42	977	Sugar Cube melon: Resists almost everything; impossible to resist!
47	2441	Glacier Rose shallot OG: Your rows of Glacier won't reseed!
47	2443	Ed's Red shallot: Uniform deliciousness flows through its veins!
48	720	Strike shell pea: Right over the plate!
48	758	Emerald Archer pea: Hits the bullseye for flavor!
48	780	Champion of England shell pea: Britomart's side dish!
49	885	Amish Snap Pea: Stick with tradition!
49	891	Tendersweet snap pea: Tender and sweet—can't be beat!
50	3739	Corona pepper: Rarified gaseous envelope of the sun, in a pepper!
51	3764	Apple pepper OG: Laura already bites peppers like apples!
52	3825	Carrot Bomb pepper OG: Explosive crunch for your lunch!
53	3811	Caballero Ancho/Poblano: Qué problema, caballero?
54	1725	Naked Bear pumpkin: Because it's not right to make a bear wear pants!
54	1745	Bellatrix pumpkin OG: Perfect face for a wicked Lestrange grin!
56	2230	Pink Lady Slipper radish: Rare, provocative, evanescent!
56	2245	Pearl radish OG: Sow a string of pearls for your sweetie!
66	4050	Bizhiki tomato OG: Buffalo comes thundering back!
66	4052	KC 146 tomato OG: The inspiration was all spent in breeding!
67	4239	Arbason tomato OG: Sounds pretty serious!
68	4058	Cherokee Green tomato OG: A new fruit from old roots!
70	4290	Plum Regal tomato: In case Harry and Meghan come to dinner!
70	4033	Copper Beauty tomato: This treasure will never be tarnished!
71	4035	Tropical Sunset cherry tomato: Taste paradise in your tomato patch!
71	4111	Sweet Aperitif cherry tomato: Tiny tomatoes to garnish cocktails!
71	4112	Flaming Burst tomato: Golden pears will meteor into your mouth!
72	4265	Cherry Bomb tomato OG: Explosive, but won't blow off your hand!
74	1045	Fantasy watermelon OG: Organic. Big. For the North. Swipe Right!
81	4560	Seed Fennel OG: Bred to bolt!
85	4832	Hot Biscuits Amaranth OG: HOT BISCUITS!!!
89	5017	Cupcakes Cosmos OG: Sweet and dainty!
89	5050	Purple Ballerina Datura OG: May become your principal dancer!
91	5111	Grace Mix Godetia OG: Graces your garden!
92	5157	White Finch Laceflower OG: Goldfinches are for the sunflowers!
95	5308	Frizzle Sizzle Pansy: A hot new perm for the flower garden?
96	5385	Dara Queen Anne's Lace OG: Dara say carrot again?
100	5720	Jim Baggett's Choice Mix Zinnia OG: Jim Baggett's got taste!

Back in 2019

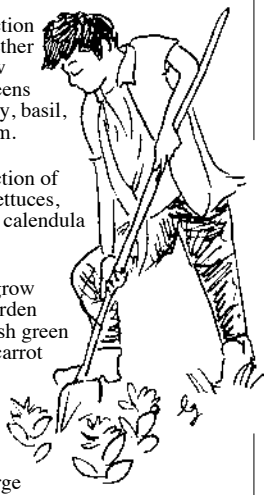
page	item	
6	333	Limelight bean: Back in the limelight!
6	334	Black Coco bean: Delicious and easy to grow!
6	335	Tiger's Eye bean: It's the thrill of the bean pot!
6	320	Mitla bean: Not a tepary but has lots of tepary qualities!
7	366	Agate Pinto bean: Bushy semi-precious legume!
7	388	Saturday Nite Special bean: Take this bean out on the town!
7	280	Northeaster bean: The only nor'easter we want!
11	3306	Solstice broccoli: The zenith of cultivars!
15	2051	Nantes Fancy carrot: For all you fancy-nantes out there!
37	2787	De Morges Braun lettuce: A bronze beauty!
39	2841	Nancy lettuce OG: Better than Tonya any day!
40	2877	Marshall lettuce OG: Stands out in its department!
41	2886	Winter Wonderland lettuce OG: White Rabbit approved!
46	2490	Rossa di Milano onion OG: Long-keeping, red and Italian!
48	792	Alderman pea: Stepped out of the town office back into the garden!
49	885	Mega snap pea OG: Better than any kilo pea!
51	3741	Amish Pimiento pepper: Can be grown without electricity!
60	1596	Jade Dragon bitter melon: This dragon is no myth!
69	4097	Ruby Gold tomato: It's precious!
86	4886	Panorama Red Bee Balm: The bees will paint your garden red!
87	4912	Kablouna Mix calendula: Goddess of our seedroom!
87	4930	Blue Clips Bellflower: Take this Bell to the ball!
96	5371	Fluffy Ruffles poppy OG: Replacing old fave, Ruffy Fluffles!

SEED COLLECTIONS

Overwhelmed by choices? Choose a collection. We'll select the varieties, and you'll save about 10% off individual packet prices, 20% for the Freed Seed Collection.

5931BB Bee and Butterfly Pollinators Collection Help feed the bees and butterflies and attract pollinators to your garden. Contains 10 packets. Our choice among the following: Phacelia, poppies, calendula, nasturtium, cilantro, borage, tithonia, dill, Hon Tsai Tai, butterfly weed, anise hyssop, Bachelor Button mix, sunflowers or cosmos. ✿
A=10 pkts, $14.00

5932CC Chicken Scratch Clucktion A collection of quick-growing tasty greens for chickens. Grow a patch for them to graze on, or for you to clip and feed to them—or yourself. Contains 6 packets including: lettuce mix, kale mix, collards, swiss chard, Yokatta Na or Senposai, and spinach.
A=6 pkts, $9.00



5933CG Container Garden Collection A selection of varieties that will grow well in small spaces, whether a waist-high growing box, a raised bed, or a window box. Contains 10 packets including: lettuce mix, greens mix, cherry tomato, sweet pepper, cucumber, parsley, basil, scallions, pac choi, and trailing petunia or nasturtium.
A=10 pkts, $16.00

5934OS Freed Seed Collection A diverse selection of OSSI-pledged varieties (see pg 107). Will include lettuces, greens, winter squash, leeks or onions, watermelon, calendula and more. Support the Seed Commons!
A=8 pkts, $15.00

5935GS Garden Start-up Collection Easy-to-grow varieties for spring through fall harvest. Includes garden tips for beginners. Contains 7 packets including: bush green beans, zucchini, cucumber, lettuce mix, calendula, carrot and sweet basil.
A=7 pkts, $9.00

5937KG Kids' Garden Collection Fun and playful easy-to-grow varieties to encourage young gardeners. Contains 8 packets including: Mammoth sunflower, Scarlet Runner bean, Calico popcorn, large pumpkin, purple or red carrots, gourd mix and nasturtiums.
A=8 pkts, $13.00

5938KH The Kitchen Herb Garden A collection of 7 classic culinary herbs. Basils, parsley, cilantro, dill and more to add flavor to every dish. Grow them in pots, raised beds or in your kitchen garden.
A=7 pkts, $10.00

5939MG Microgreens Collection Grow trays of tasty vibrant greens all year round. Contains 8 packets including: kale, collards, broccoli, purple basil, cress, arugula, mustard and spinach.
A=8 pkts, $11.00

5936EF Edible Flower Collection A cheerful collection of edible flowers. Grow them to add to salads, vases, or to add color to your garden. Contains 6 packets: our choice of calendula, borage, heartsease pansy, nasturtium, Gem marigolds, bachelor buttons, anise hyssop or Hon Tsai Tai. **NEW!**
A=6 pkts, $9.00

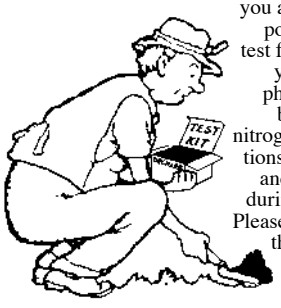
Seed Envelopes Our reclosable seed envelopes, plain white with no logo. Use them for seed saving, repacking bulk seed, or tucking away small objects. Two sizes.

5959SD Seed Envelopes 3 1/4 x 4 3/4"
A=bundle of 10, $2.50 **B**=bundle of 50, $8.00 **C**=bundle of 100, $12.00

5960SE Seed Envelopes 3 5/8 x 5 1/2"
A=bundle of 10, $3.00 **B**=bundle of 50, $9.00 **C**=bundle of 100, $14.00

SOIL TESTING SERVICE

5965ST Soil Testing & Organic Fertilizer Recommendation Service Don't guess—test! Applying fertilizers and soil amendments without the guidance of a professional soil test is like driving downtown with your eyes shut. Applying too much of one nutrient can tie up others and wreak havoc on your soil biology. But even with test results in hand, which fertilizer do you choose and how much do you apply? Fedco to the rescue! We'll send you a soil test kit and sampling instructions, plus a postage-paid box to return your soil sample and test form to the Maine State Soil Lab. You'll learn your soil pH, organic matter percentage, phosphorus, potassium, magnesium, calcium, sulfur, boron, copper, manganese, zinc, and available nitrogen, plus we'll offer customized recommendations for how to correct any deficiencies or imbalances in your soil. For best results, take samples during the growing season while the soil is warm. Please be patient! We are at the mercy of how busy the soil lab is at any given time.
A=1 test kit, $45.00



Artichoke

Cynara cardunculus var. scolymus

~20 seeds/g. 0.5g packet contains ~10 seeds.
Culture: Artichoke is a biennial, and in the north the young plant must be tricked into thinking it has already gone through a season of growth and a winter, a process called vernalization. Start indoors in mid-February and grow on at warm temperatures (at least 60˚) avoiding direct hot sun or overwatering (misting is preferred). Transfer after 6 weeks to a cold frame when outdoor temperatures stay above 25˚. Keep as cool as possible over the next 6 weeks without going below 25˚. Then, set out about 3' apart, feed heavily and give lots of moisture and space (10 sq ft per plant). IRT mulch (**8421**) and/or row covers (**8874**) can be helpful to hasten maturity.
Days to maturity are from date of transplanting, not seeding.

3608SO Imperial Star OG (120 days) Open-pollinated. Wayne Schrader and Keith Mayberry of California Cooperative Extension made this delicious flowerbud accessible to northern gardeners by developing Imperial Star in 1991. "We have had great luck here in NE Washington State Zone 5's cool dry season. We always get at least 6–8 chokes per plant, and have gotten up to 13 each from several plants! They may not get as big as those California artichokes, but are a lot more tender. We eat the stems!" said Dodie Bowser of Fruitland, WA. In more northern zones, most plants will bear 2–4 chokes, producing in the cooler fall weather that they prefer to summer's full heat. Left to bloom, the buds open into massive otherworldly blue flowers that dry well. Plants (both seedlings and mature) can tolerate light frosts but not hard ones. **PVP** expired. *Caution: May not ripen in northernmost areas.* ①
A=0.5g, $2.00 **B**=1g, $3.50 **C**=4g, $9.00 **D**=28g, $40.00

Arugula: see Greens, p. 27

BEANS

Phaseolus Vulgaris

All beans are open-pollinated.

BUSH BEANS

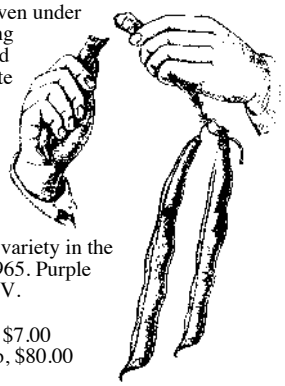
Avg 180 seeds/2 oz packet. 2 oz packet sows 25 ft; 1 lb, 200 ft. Seed sizes vary.
Culture: Tender, will not survive frost. Plant seeds 3–4" apart in rows 24–30" apart after all danger of frost has passed. Pick frequently for maximum yields, but avoid harvesting or disturbing foliage in wet weather to prevent spread of fungal diseases. Legumes have moderate fertility needs and can fix their own nitrogen. Excessive nitrogen may induce some bush varieties to develop vines in moist hot weather. White-seeded beans usually don't germinate as well as dark-seeded. Minimum germination soil temperature 60˚; optimal range 60–80˚.

Diseases:

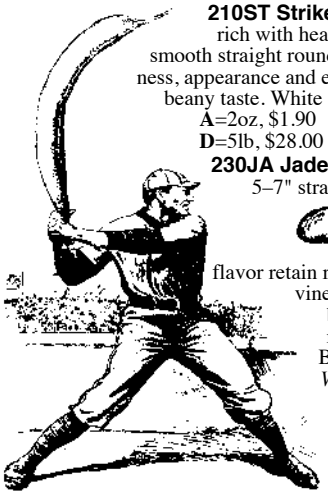
ANTH	Anthracnose	HB	Halo Blight
BBS	Bacterial Brown Spot	NY 15	NY 15 Common Bean Mosaic Virus
CBMV	Common Bean Mosaic Virus	PM	Powdery Mildew
CTV	Curly Top Virus	PMV	Pod Mottle Virus
DM	Downy Mildew	R	Rust

White mold *Sclerotinia sclerotiorum* affects more than 300 plant species. In beans, low humidity, good air circulation and wider spacing, both between plants and between rows, reduce the likelihood of this soil-borne infection.
Days to maturity are from date of direct seeding.

GREEN BUSH BEANS



Provider (50 days) For highest early yields—even under adverse conditions—and rich beany taste, nothing provides like Provider. Noted for its concentrated sets of round 5–5 1/2" pods. "There is no substitute for Provider beans," says Chris Carlin of Hyde Park, VT. Also excellent for canning and "my choice for freezing and dilly beans," says Elaine Carlson of Cape Porpoise, ME. Resilient: Provider and **225** Royal Burgundy re-flower repeatedly after heavy pickings followed by rains. Came in one day ahead of Contender for earliest in our observation plot. Our best-selling variety in the catalog year after year. Released by USDA in 1965. Purple seed. Resistant to CBMV, NY 15, PM, DM, PMV.
204PR Provider ③
A=2oz, $1.90 **B**=8oz, $4.50 **C**=1lb, $7.00
D=5lb, $19.50 **E**=10lb, $35.00 **K**=25lb, $80.00
205PO Provider OG ①
A=2oz, $2.80 **B**=8oz, $7.00 **C**=1lb, $12.00 **D**=5lb, $55.00
E=10lb, $100.00 **K**=25lb, $240.00 **L**=50lb, $450.00



210ST Strike (53 days) Market growers will strike it rich with heavy yields of medium-green 5½" slender smooth straight round pods. Strike sets the standard for earliness, appearance and ease of picking, and has a pleasing sweet beany taste. White seed. Resistant to NY 15 and CBMV. ③
A=2oz, $1.90 **B**=8oz, $5.00 **C**=1lb, $8.00
D=5lb, $28.00 **E**=10lb, $40.00 **K**=25lb, $95.00

230JA Jade (56 days) Produces great yields of tasty 5–7" straight slender round dark green beans that keep coming until late in the season, long after others have quit. Tender pods with traditional bean flavor retain rich color longer than others, both on the vine and after picking. Jade's strong upright bush habit holds pods above the ground, reducing curling and tip rot. Resistant to BBS, CBMV, NY15, CTV, tolerant to R. *White-seeded Jade is a fussy germinator. Needs soil temperature at least 60° and irrigation during dry spells.* ③
A=2oz, $2.00 **B**=8oz, $6.00
C=1lb, $10.00 **D**=5lb, $40.00
E=10lb, $70.00 **K**=25lb, $150.00

238BB Bush Blue Lake 274 (57 days) Long considered the taste standard for home-garden bush beans. Pods average 6", fill slowly with tender plump beans. Very high yields. Not heat tolerant, but excellent for fall crops in areas with very hot summers. Introduced in 1961 as a bush variety of the famous Blue Lake pole bean. White seed. Resistant to CBMV, NY 15. ③
A=2oz, $1.90 **B**=8oz, $5.00 **C**=1lb, $8.00 **D**=5lb, $30.00
E=10lb, $50.00 **K**=25lb, $100.00

Roma types

214GC Greencrop (53 days) An early flat-podded Romano type especially adapted to the North. Pods can grow up to 8" long while still retaining good quality. Bred by Albert F. Yaeger and Elwyn Meader at University of New Hampshire. 1957 AAS. White seed. Tolerates CBMV. ③
A=2oz, $1.90 **B**=8oz, $5.00
C=1lb, $8.00 **D**=5lb, $28.00
E=10lb, $45.00 **K**=25lb, $100.00

246RM Roma II (59 days) True flat bush Romano offers heavy yields of fleshy medium-green 5" pods that are slow to develop seeds. White seed. A small percentage will develop runners. Resistant to CBMV, NY15. ③
A=2oz, $2.30 **B**=8oz, $6.00
C=1lb, $10.00 **D**=5lb, $40.00
E=10lb, $60.00 **K**=25lb, $125.00
L=50lb, $200.00

PURPLE BUSH BEAN

225BO Royal Burgundy OG (55 days) Straight 5" meaty **purple** pods turn bright green after two minutes of blanching. Less foliage than Royalty Purple Pod. Grows well even in cold conditions. Light brown seed. Resistant to CBMV, NY 15, PM. ①
A=2oz, $2.90 **B**=8oz, $7.00 **C**=1lb, $12.00 **D**=5lb, $55.00
E=10lb, $100.00 **K**=25lb, $240.00

Key to abbreviations and symbols in the catalog

OG after cultivar name = Organically Grown, entire lot is certified-organic seed. See page 104 for more about the OG and ECO designations.
ECO after cultivar name = entire lot is sustainably grown seed.
BD after cultivar name = entire lot is biodynamically grown seed.
PVP = Plant Variety Protected. Unauthorized propagation of the seed is prohibited. The use of PVP in the catalog is for information and in no way constitutes an endorsement by Fedco of plant patenting.
AAS = All-America Selection.
❄ indicates cold-hardy through at least part of Maine winter. See page 27.
☙ = a variety introduced by Fedco followed by the year first offered.
Ω = a variety grown and supplied by the plant breeder. More on page 36.
✿ = a variety especially attractive to pollinators.
~ = approximately
BR = Breeder Royalty. We pay royalties to independent breeders when we buy their seed from other sources. See page 106.
IR = Indigenous Royalty. We pay royalties to indigenous peoples to recognize the Seed Keepers of the past. See page 106.
= Indicates a variety pledged to the Open Source Seed Initiative. More on page 107.

BUSH WAX BEANS

265RO Gold Rush OG (54 days) Tender 5–6" straight round stringless beans of this standard early variety have excellent flavor and high yields. Concentrated sets of yellow pods with green tips hold well on vigorous plants. If you give your market customers a sample, they won't pan this gold! White seed. Tolerates CBMV. ①
A=2oz, $2.60 **B**=8oz, $7.00 **C**=1lb, $12.00 **D**=5lb, $55.00
E=10lb, $100.00 **K**=25lb, $240.00

270GB Golden Butterwax (56 days) A white-seeded wax bean impressive for its rich yellow color and straight pods. Extra beany. Resistant to CBMV, NY15, tolerant to ozone damage. ③
A=2oz, $1.80 **B**=8oz, $6.00 **C**=1lb, $8.00 **D**=5lb, $30.00

277DO Dragon Langerie OG (57 days) Also known as Dragon's Tongue. Tasty attractive 19th-century heirloom hails from the Netherlands. Compact stocky bushes bear abundant purple-violet flowers followed by flat 6" creamy yellow pods mottled with purple tiger stripes. Sunlight helps the colors become vivid, so plant farther apart in the row than normal bean spacing so interior sets develop good color. Crisp, stringless and amazingly juicy when eaten fresh. Cook or market promptly after picking; turns rubbery and loses snap when stored. Not recommended for freezing. Loses purple coloration in cooking. Seed purplish brown with blue stripes. ①
A=2oz, $2.70 **B**=8oz, $7.60 **C**=1lb, $12.00 **D**=5lb, $52.00
E=10lb, $100.00 **K**=25lb, $215.00

BUSH HARICOTS VERTS

Avg 70-125 seeds/half oz packet. Half oz packet sows 10-16 ft; 1 lb, 320-500 ft. Seeds are smaller than those of regular bush beans. *Haricot vert* is French for green bean, and these have fancier quality than American beans and command a premium in markets. They are more tender and take less time to cook. Also called filet beans. For optimal flavor and texture, pick when pods are thinner than a pencil. Picking interval should be 48 hours or less.

Montpellier (57 days) We are seeking are grower for this refined haricot vert. *Not available in 2019*.

248MS Masai (58 days) Unlike classic haricot verts, Masai grows only 5" long, the slender pods juicy and crisp with a pleasing beany flavor. Although much more compact than Provider, each plant cranks out dozens of the diminutive beans that hold longer without fattening, so Masai allows a short vacation from the garden. Elaine Carlson calls them "one of the wonders of the world—I cannot believe how long these **green** crunchy slivers stand on the little plants." But Holli Cederholm still found she had to pick them every other day to achieve the tender gourmet quality her restaurant markets demanded. A space saver since only a few plants will suffice for a small family. White seed. ~170 seeds/oz. ⑥
A=½oz, $2.10 **B**=2oz, $4.50 **C**=8oz, $13.00 **D**=1lb, $22.00
E=5lb, $90.00

249MO Maxibel OG (61 days) A heavy producer of uniform dark **green** fancy 6–8" pods of exceptional length, ramrod straightness and superb taste. For maximum tenderness and most succulent flavor pick the normal-sized bushes early and often. A gourmet market specialty. White flowers, speckled brown seed. Resists ANTH and CBMV. ~140 seeds/oz. ①
A=½oz, $2.10 **B**=2oz, $4.60 **C**=8oz, $7.60 **D**=1lb, $12.00
E=5lb, $55.00 **K**=10lb, $100.00

251CC Concador Yellow Filet (62 days) Uniform 4½–5" **yellow** pods stay slender for a long time on the vine and will keep producing copiously if tended. With medium-sized upright plants larger than **248** Masai, Concador is the yellow-bean lover's answer to Masai. Pick your own pot of gold for multiple colors in this fast-growing niche. White seed. Resistant to CBMV, ANTH and HB. ~250 seeds/oz. ③
A=½oz, $2.70 **B**=1oz, $5.00 **C**=4oz, $16.00

254VL Velour Purple Filet (62 days) Velour delivers ample harvests of slender straight bright 4–5" **purple** pods that turn green when blanched. With Masai and Concador you can harvest a tri-colored-fecta for home or market. Upright medium-sized plants. Light brown seed. Resistant to CBMV and HB. ~190 seeds/oz. ⑤
A=½oz, $2.70 **B**=2oz, $5.00 **C**=8oz, $16.00

Varieties organized within sections by days to maturity.

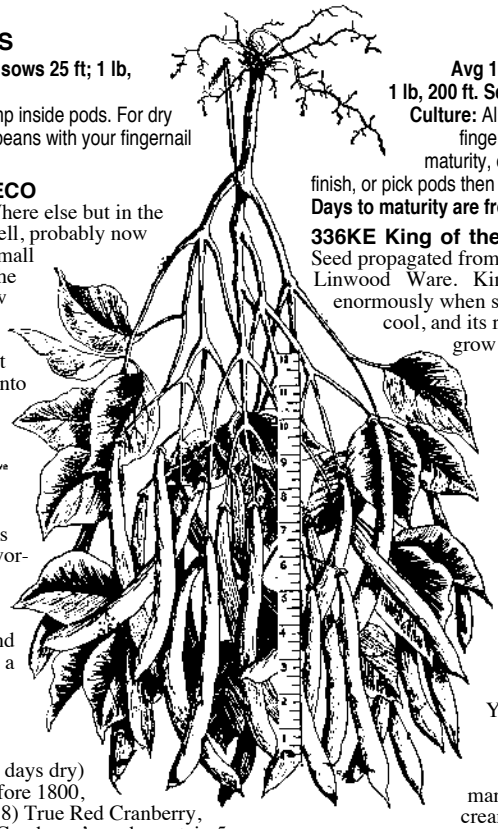
About our Supplier Codes

Know where your seed comes from! This unique Fedco feature provides information about the source(s) of each seed variety. Varieties with more than one supplier may have two or more codes. We code according to our best information at press time. When seed is short we must sometimes change suppliers later in the season. With notable exceptions, we generally choose varieties based on their merits rather than on our supplier preferences. **We do not offer genetically engineered varieties**, although we purchase from corporations engaged in genetic engineering. Use the supplier codes to help you make your own choices about whom you are supporting and which varieties are best for your garden or farm.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

SHELL AND DRY BEANS

Avg 130 seeds/2 oz pkt, 1000 seeds/lb. 2 oz packet sows 25 ft; 1 lb, 200 ft. Seed sizes vary.

Culture: Harvest shell beans when the beans are plump inside pods. For dry beans allow pods to dry on the vine until pressing the beans with your fingernail leaves no indentation.



321FL Fast Lady Northern Southern Pea ECO (65 days shell, 90 days dry) *Vigna unguiculata* Where else but in the south would this cowpea be called a lady pea? Well, probably now in the north since Carol Deppe has selected this small white bean to mature quickly in cool summers. The easy-to-pick, easy-to-shell 7–8" yellow pods grow upright on bushy semi-erect plants that impede mold. Beautiful yellow flowers attract pollinators who feast on the nectar. Pick these fast ladies early for shellies, or let them fully mature into dry beans—they have a creamy texture and a reputation for cooking quickly without a pre-soak. **BR** ✿ ①

A=1oz, $3.50 **B**=2oz, $6.50
C=8oz, $22.00 **D**=1lb, $35.00

326DW Taylor Dwarf Horticultural (68 days shell) Also known as Speckled Bays, this bush shell bean has been a traditional regional favorite since before 1800, producing cream-colored pods early. These are ready to shell when carmine-red splashes appear on them. Shell right after picking, boil until tender (30–45 minutes) and mix with olive oil, chopped garlic and parsley for a late summer treat. Buff seed with red stripes. ③

A=2oz, $2.00 **B**=8oz, $5.00
C=1lb, $8.00 **D**=5lb, $30.00
E=10lb, $45.00 **K**=25lb, $100.00

328VC Vermont Cranberry (70 days shell, 95 days dry) Though each is a New England tradition since before 1800, this bush bean is not to be confused with **371** (pg 8) True Red Cranberry, a pole bean with a different coloration. Vermont Cranberry's pods contain 5 to 6 *speckled* cranberry-colored shell beans. Reliable, hardy, easy to shell. Sometimes gets viney. **IR** ①

A=2oz, $2.80 **B**=8oz, $6.00 **C**=1lb, $9.50
D=5lb, $39.00 **E**=10lb, $75.00

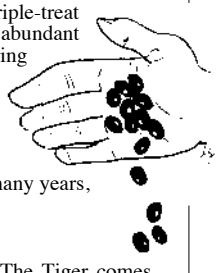
331CO Silver Cloud Cannellini OG (70 days shell, 90 days dry) An improved Cannellini with an upright bush habit bred by Washington State University. Green with bright pink streaking, Silver Cloud's short fat 5–6" pods contain five plump white seeds instead of the eight skinny ones found in most cannellini pods. The overall appearance is more like that of a **326** Taylor Horticultural bean than of a typical white kidney bean. These make amazingly early and absolutely superb shell beans, "incredibly good, especially in a salad with bleu cheese dressing," says Sylvia Loomer of Aberdeen, WA. When dried and cooked, its smooth meaty texture and dense nutty flavor are prized in minestrone and other soups and stews. Resists CBMV, CTV, tolerates R. ①

A=2oz, $2.70 **B**=8oz, $7.20
C=1lb, $11.00 **D**=5lb, $48.00

333LL Limelight ECO (60 days shell, 85 days dry) A versatile variety, excellent both as a shell and a dry bean. Plants benefit from loose trellising to avoid possible lodging. They set light green to white seeds similar in shape, color and taste to baby limas, except much easier to grow in our climate and sweeter with a buttery texture. Developed in Alberta, Canada, for growing where it is too cold to mature baby limas, and released in 1968. ① **BACK!**

A=2oz, $3.60 **B**=8oz, $9.00 **C**=1lb, $14.00 **D**=5lb, $65.00

334BO Black Coco OG (60 days shell, 85 days dry) A triple-treat bean that is a joy to grow because it is so easy. 2' plants set abundant 5" round pods of plump shiny black seeds that resist shattering in the garden, yet are easy to shell. Coco can be harvested as a green bean although it gets tough if harvested when fully mature. Ten days later it's a good shell bean, but really comes into its own as a refried or soup bean. Larger than other black beans—and early! Cooks quickly with a delicious aroma that promises a hearty robust soup. After many years, we've gotten this one back into production. ① **BACK!**



A=2oz, $3.00 **B**=8oz, $8.00 **C**=1lb, $12.00
D=5lb, $55.00 **E**=10lb, $100.00 **K**=25lb, $225.00

335TE Tiger's Eye ECO (65 days shell, 85 days dry) The Tiger comes and goes. This year it's back! Also called *Pepa de Zapallo*, originally from Argentina and Chile. Among the most beautiful of all beans, bright golden ochre with maroon swirls and a smattering that are maroon with golden speckles. That would be reason enough to grow them, but they also make superb fresh shell and delicious baked beans with rich full-bodied flavor. A good pinto substitute: the tender skins pretty much disappear upon cooking. Wide 4" pods fill with large flattened kidney-shaped seeds mostly white at the shell stage but taking on more yellow as they dry. Bush plants grow 2' with a slight tendency to vine. ① **BACK!**

A=2oz, $3.00 **B**=8oz, $8.00 **C**=1lb, $12.00 **D**=5lb, $55.00
E=10lb, $100.00

DRY BEANS

Avg 130 seeds/2 oz pkt, 1000 seeds/lb. 2 oz packet sows 25 ft; 1 lb, 200 ft. Seed sizes vary.

Culture: Allow pods to dry on the vine until pressing the beans with your fingernail leaves no indentation. If heavy rains threaten just before maturity, either pull plants by the roots and hang them in a dry place to finish, or pick pods then shell and allow to finish drying indoors.

Days to maturity are from date of direct seeding to dry harvest.

336KE King of the Early (85 days) Beautiful mottled red baking bean. Seed propagated from a sample sent to us years ago by seed-saving customer Linwood Ware. King's ability to ripen early, its capacity to swell enormously when soaked, its utter dependability through hot summers and cool, and its robust flavor won our hearts. We've found King easy to grow and heavy yielding year after year. ①

A=2oz, $2.50 **B**=8oz, $7.00 **C**=1lb, $11.00
D=5lb, $45.00 **E**=10lb, $75.00 **K**=25lb, $175.00
L=50lb, $325.00

337MS Maine Sunset ECO (85 days) Back in the '30s, quite near here over on Knox Ridge, a farmer named Bantam passed along some bean seeds he liked to his mailman. Skip ahead to 2015. Fedco staffer Megan O'Brien had just bought a farm in the area and wanted to grow local dry beans. She asked Cedric, brother of the prior farm owner, if he'd heard of Maine Sunset. In typical Maine fashion, he hedged for a bit—then produced a coffee can of beans. His father was the mailman and his family had been growing the seeds all along on that very same land. His parents had discovered the beans "ripen to the fully dry stage somewhat earlier than other favorites like Jakes and Yellow Eye and were every bit as good as baked beans." This original strain is an everbearing variation of the Soldier-type featuring beautiful plump round-oval ivory-white beans irregularly splotched with brownish-maroon around the hilum. A wonderful baking bean with a creamy texture and rich flavor when cooked, comparable to Maine Yellow Eye. Good yielder. ①

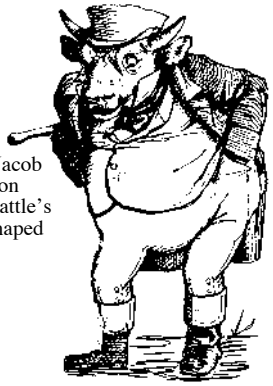
A=2oz, $2.50 **B**=8oz, $7.00 **C**=1lb, $10.00 **D**=5lb, $45.00
E=10lb, $80.00 **K**=25lb, $175.00

320MT Mitla ECO (85 days) Though this variety first came to us as a tepary bean, it is not. Acting on a tip from Tim Springston of Oxbow Farm in Erin, NY, we grew it out in 2014 alongside four genuine tepary beans. We found it looked clearly different from the true teparies and like the *vulgaris* species. Even more telling: Mitla thrived in our cooler moist climate, but the true teparies, better adapted to the extremely arid Sonoran desert, struggled and had almost no bean set. Mitla, hailing from the Mitla Valley of Oaxaca, Mexico, is the only so-called tepary widely grown in the north. Its dense foliage produces medium runners, lavender flowers and good yields of thin delicate pods each containing 5–6 lustrous black seeds. A good crop for new plots, it covers the ground and builds the soil. The great-tasting nutritious beans are excellent in black bean soup and for refries. Soak the small seeds and let them cook longer than other beans. ① **BACK!**

A=2oz, $4.00

338MX Marfax ECO (86 days) These are the beans served at Sagadahoc MOFGA's famous baked bean, switchel and cider booth at the Common Ground Country Fair. This chapter has vended at all 42 fairs and sold baked beans since 1996. Heirloom resembling Swedish Brown Bean, but earlier and higher yielding. Richly flavored brown baking bean very well adapted to our cool climate. Golden-tan seed. **IR** ①

A=2oz, $3.00 **B**=8oz, $8.00
C=1lb, $12.00 **D**=5lb, $55.00
E=10lb, $100.00



343JC Jacob's Cattle ECO (88 days) Popular New England heirloom, often referred to as Jake's, may have originated with Native Americans in the Southwest. Derives its name from the biblical story of Jacob and the spotted cattle. Its dark red speckles on white background are said to look like the cattle's markings. If harvested earlier, the kidney-shaped beans make superb shellies. **IR** ①

A=2oz, $2.80 **B**=8oz, $7.30
C=1lb, $11.00 **D**=5lb, $48.00
E=10lb, $92.00

798LG Guard-N Combo Legume Inoculant
Leguminous plants can add nitrogen to the soil—if they can host the right bacteria. This combination of strains inoculates the roots of the legumes that most farmers and gardeners plant. For green and dry beans, limas, favas, bell beans, soybeans, peas, sweet peas, cowpeas, lentils and peanuts. For home gardens, moisten the seed slightly and sprinkle on inoculant, then plant.

A=treats 8lb, $6.00 **B**=treats 50lb, $10.00

349DR Soldier ECO (89 days) Unlike our soldiers in most faraway wars, these Soldiers have a clear winnable mission within a defined timetable: to reproduce themselves every year for our mutual benefit! Large drought-tolerant white kidney beans with red-brown figures on the eyes. Also called Red Eye, the "soldier" figure looks something like a toy soldier, or an 18th c. European soldier. A favorite in colonial Bean Town. ①
A=2oz, $2.10 **B**=8oz, $6.00 **C**=1lb, $9.00 **D**=5lb, $40.00
E=10lb, $65.00 **K**=25lb, $150.00 **L**=50lb, $275.00

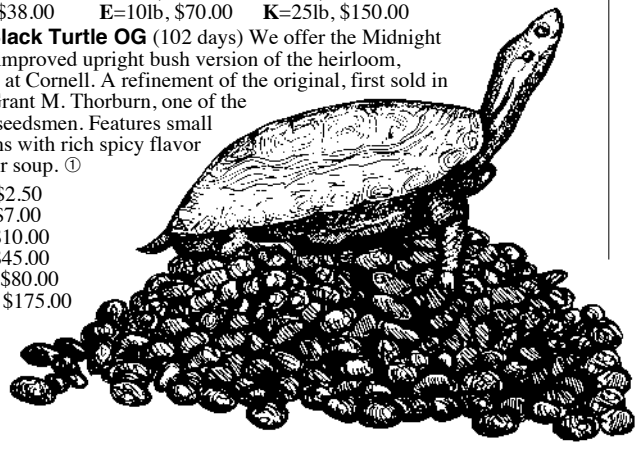
353KN Kenearly ECO (89 days) Yellow Eye is one of the signature varieties of Maine bean hole suppers. Kenearly, a selection of Yellow Eye, was developed at the Kentville, Nova Scotia, research station. Very similar to the Maine Yellow Eye strain we formerly sold, but with slightly larger eye and more uniform maturity. Plump oval medium-sized beans, cream with yellow eye. ①
A=2oz, $3.00 **B**=8oz, $7.00 **C**=1lb, $11.00 **D**=5lb, $50.00
E=10lb, $90.00 **K**=25lb, $200.00

358MN Monos Negros ECO (90 days) The name means 'black monkeys' in Spanish. Marina Davis brought this small heirloom black bean to our attention. Plant economy and extreme earliness are its primary assets. Plants sprawl and twine, but don't get moldy. Monos ripens much earlier than **385** Black Turtle, but with not quite as rich flavor. Seed collected by Will Bonsall from Salvadoran immigrants in Vassalboro, ME. ①
A=2oz, $3.00 **B**=8oz, $11.00 **C**=1lb, $19.00 **D**=5lb, $75.00

366AP Agate Pinto ECO (92 days) Mostly bush prolific pinto with medium-sized slightly flattened mottled beans of rich spicy flavor and creamy texture. Does well in the short seasons of the north. Hailed as a breakthrough when introduced in 1982 by Rogers Bros. who crossed Ouray with UI 114, then selected to dwarf most of the typical vininess out of pintos, making Agate easy to harvest. An occasional plant (less than 5%) will still send out sprawling runners. Excessive nitrogen can induce additional vining. Quick cooking, essential bean in Mexican cuisine. Widely adaptable. Resists CBMV. ① **BACK!**
A=2oz, $3.00 **B**=8oz, $7.00 **C**=1lb, $10.00 **D**=5lb, $40.00

376RK Red Kidney (102 days) An early-maturing light-red kidney bean developed at Cornell. A favorite for chili and minestrone. Large beans mature at least a week earlier than similar types. Seed grown in Maine. ①
A=2oz, $2.00 **B**=8oz, $5.60 **C**=1lb, $9.00
D=5lb, $38.00 **E**=10lb, $70.00 **K**=25lb, $150.00

385BO Black Turtle OG (102 days) We offer the Midnight strain, an improved upright bush version of the heirloom, developed at Cornell. A refinement of the original, first sold in 1832 by Grant M. Thorburn, one of the first U.S. seedsmen. Features small black beans with rich spicy flavor popular for soup. ①
A=2oz, $2.50
B=8oz, $7.00
C=1lb, $10.00
D=5lb, $45.00
E=10lb, $80.00
K=25lb, $175.00



388SN Saturday Nite Special ECO (105 days) Legendary plant breeder Elwyn Meader was hired by famous Maine baked bean company B&M (founded 1867) to breed a pea bean that would bake well and have a season short enough to grow in Maine. B&M lost interest when it was bought out by the William Underwood Corporation in 1965 so the bean was never introduced to the public. Preserved by Elwyn's son John as X-3, this small pure-white pea bean is early, impressively productive and cooks well. Short sturdy plants bear more than 20 pods each and "dry down nice." John, recalling his father's knack for naming cultivars, suggested that Elwyn might have called it Saturday Nite Special in honor of traditional Maine bean suppers and their explosive after-effects! So we did. ☘2009 ① **BACK!**
A=1/2oz, $2.40
B=2oz, $4.40
C=8oz, $14.00
D=1lb, $24.00

Again and again…locked in a deep freeze sitting by the wood stove with a real paper catalog in front of me. I've ordered 3 times as much as I really needed. Thank you. Please don't stop.
– Ellen Lobingier, Rockwood, PA

Pole Beans

Avg 30 seeds/half oz packet. 800-1500 seeds/lb. Seed size varies by variety. Half oz packet sows 7–10'.

Culture: Though it can be fun to plant beans on poles or sunflowers, most folks grow them on fencing. Plant 3–4" apart along the fence. All pole beans have strings that won't annoy you if they're picked early and often. Frequent clean picking keeps your vines vigorous and productive. Pick and compost those fat ones hanging low that got away, or cut them coarsely and add them to minestrone as suggested by Crystal Nichols of Greene, ME. If you leave them, your plants will stop producing, satisfied they've fulfilled their reproductive mission.

Days to maturity for pole beans are from date of direct seeding to fresh bean harvest, unless noted otherwise.

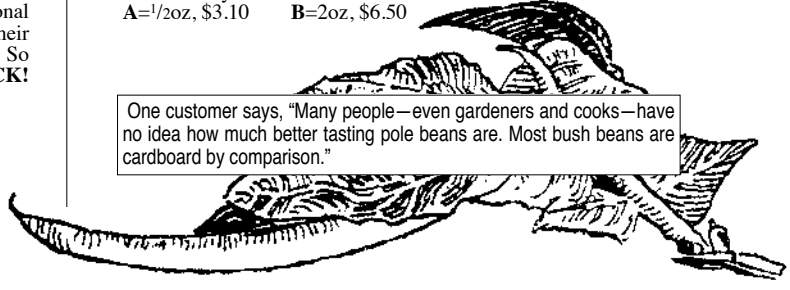
297MP Multicolored Pole Bean Mix (60-72 days) Plant a pole of polychromatic pods! We combine green, yellow, purple and striped varieties of staggered maturity into one packet. Great for those wishing to try all our varieties but with room for only one or two poles, and for CSAs who want to put a whole rainbow into each box. Varieties, our choice, will vary from year to year according to availability. ②③
A=1/2oz, $1.90 **B**=2oz, $4.00
C=8oz, $10.00 **D**=1lb, $16.00

280NO Northeaster OG (55 days) Also known as Kwintus. We can never grow enough seed for this superior pole bean that ripens almost two weeks earlier than Kentucky Wonder. Somewhat flattened pods are slow to get tough even when big. Usual length is 7–8". Flavor improves with blanching. Loses some vitality after several pickings. If you wish continuous production of pole beans till frost, make a second planting of Northeaster in July for September harvest, or sow a later variety like Kentucky Wonder as well. White seed. ① **BACK!**
A=1/2oz, $2.20 **B**=2oz, $6.00
C=8oz, $18.00 **D**=1lb, $30.00

279SY Seychelles (55 days) 2017 AAS winner Seychelles produces a flood of 5–6" stringless round-podded very dark green fresh beans. The deep pod color is mirrored in the lush healthy foliage. Climbing 7–9', vines set early and steadily as they grow with multiple beans ripening simultaneously on trusses for easy grab-n-go picking. Our supplier recommends either trimming any growth above the top of the trellis or staking to promote bushier habit and pod set on the lower parts of the vine. Although not the best bean for eating raw, it is meaty and mild when cooked, with green pods that don't fade. Quick to bear even in cold and wet conditions, seeds slow to develop, and good eating over a long season. Might just turn reticent bush-bean lovers into pole-sters. Resists CBMV and ANTH. ③
A=2oz, $3.00 **B**=8oz, $9.00 **C**=1lb, $15.00 **D**=5lb, $70.00
E=10lb, $130.00 **K**=25lb, $300.00

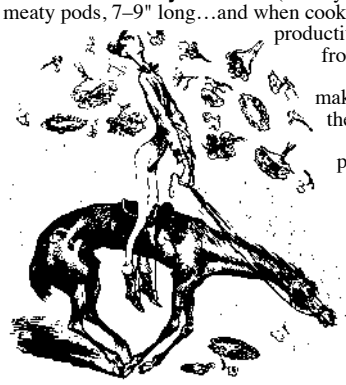
283MG Monte Gusto (58 days) An elegant standout in wax pole beans. Bright yellow 7–8" pencil-thin smooth filet beans are blemish-free, exceptionally productive, and easy to pick. Sweet, tender and rich in flavor, both cooked and raw, excellent for canning, freezing, or fresh eating. 70" plants produce until frost. We cannot sell to Idaho. Highly resistant to CBMV. ⑤ **NEW!**
A=1/2oz, $2.80 **B**=2oz, $6.00 **C**=8oz, $20.00 **D**=1lb, $32.00

281GO Golden Gate OG (59 days) Impressive for its pods' 10" span, they are nevertheless dwarfed by the 4,200' main span of the bridge for which this bean was named. These tall vines require a high stout stake, though nothing comparable to the bridge's 746' towers. The large flattened sunny yellow Romano-type beans have best eating quality at 6–8". Highly productive and freeze well. Our tasters found them "sweet and tender" with a "nice creamy texture" when cooked. ②
A=1/2oz, $3.10 **B**=2oz, $6.50



One customer says, "Many people—even gardeners and cooks—have no idea how much better tasting pole beans are. Most bush beans are cardboard by comparison."

285KW Kentucky Wonder (68 days) "…it is an old variety with solid meaty pods, 7–9" long…and when cooked no bean is better. It is enormously productive, the pods hanging in great clusters from top to bottom of the pole." So said Stark Bros. in 1921. The nutty flavor makes them outstanding for freezing. As the beans mature, the pods flatten. Pick regularly to maintain quality and production, as they get tough once the beans enlarge. A favorite since the mid-1800s. Also known as Old Homestead. Wonder was given its present name by the eminent Marblehead, MA, seedsman James J.H. Gregory in 1877. Stark Bros. again: "Of all the climbing kinds, we do not believe there is a better one than Kentucky Wonder." Brown seeds. ③

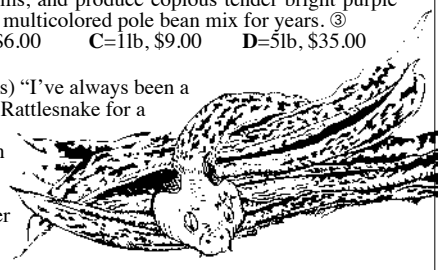


A=2oz, $2.00 **B**=8oz, $5.50 **C**=1lb, $9.00 **D**=5lb, $26.00
E=10lb, $45.00 **K**=25lb, $100.00 **L**=50lb, $175.00

288PP Purple Podded Pole Bean (70 days) Discovered by Henry Fields in the Ozark Mountains in the 1930s, this purple-podded heirloom is favored by old-timers in that region. Some kids think these beans are magic because they turn green when cooked. The vigorous vines climb 6–7', are graced by lilac-colored blossoms, and produce copious tender bright purple pods. We've included it in our multicolored pole bean mix for years. ③

A=2oz, $2.00 **B**=8oz, $6.00 **C**=1lb, $9.00 **D**=5lb, $35.00
E=10lb, $45.00

292RS Rattlesnake (70 days) "I've always been a Kentucky Wonder girl but got Rattlesnake for a substitute and am I ever glad. These beans are delicious fresh and frozen—beautiful, too," avers Catherine Hall of Ellsworth, ME. Called Preacher Bean in parts of the South, Rattlesnake produces a good harvest of juicy 6–7" pods with purple streakings said to resemble the markings of a rattlesnake. Elisabeth notes a most pleasing mushroomy aftertaste to the fresh beans. Tan seed with dark stripes. ③



A=2oz, $2.00 **B**=8oz, $6.00 **C**=1lb, $9.00 **D**=5lb, $30.00
E=10lb, $45.00 **K**=25lb, $100.00

318SR Scarlet Runner (70 days snap, 95 days shell) *Phaseolus coccineus* Climbing beans often grown as ornamentals for their brilliant scarlet blossoms that attract hummingbirds. Need trellises, fences or poles; will grow to 10–12', perfect for shading a porch. Beautifully mottled purple and black seeds may be the most beautiful in our catalog. "There is nothing like the face of amazed surprise when a child opens the pods from these plants," reports Anne Elder. Heirloom variety grown as early as 1750 by colonists and in 1791 by Thomas Jefferson. ~20 seeds/oz. ✿ ③

A=1oz, $2.10 **B**=2oz, $3.20 **C**=8oz, $7.00 **D**=1lb, $12.00
E=5lb, $50.00

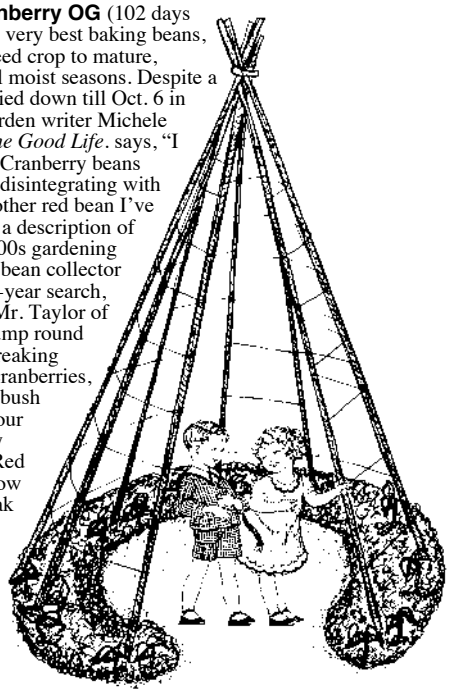
Blue Coco (72 days snap) We need a grower. *Not available in 2019.*

Dolloff (90 days) Seeking a grower for this one, too. Could it be you? *Not available in 2019.*

322RN Red Noodle Yard Long (90 days fresh) *Vigna unguiculata sesquipedalis* A pole or two of these, with their long pencil-thin 14–18" cascading burgundy pods, makes a stunning garden entrance that draws people in and excites curious inquiries. Not the earliest of Yard Long beans, an Asian specialty, but surely the most spectacular. An indifferent performer in chilly Central Maine, Noodle preferred the warmer day and night temperatures of Zone 5 hill country Massachusetts and does even better a zone or two south. Slow to produce, first ripening for CR in MA Sept. 5, but once underway it never looked back. Loves heat and moisture. Keep it picked to sustain production. Intriguing strong unique indescribable flavor is brought out best by dry-frying in a hot wok with peanut oil, garlic and soy sauce. Stringless and most tender when young and thin. Must be trellised. ~200 seeds/oz. ③

A=½oz, $3.50 **B**=2oz, $11.00 **C**=4oz, $20.00 **D**=1lb, $65.00
E=5lb, $290.00

371CO True Red Cranberry OG (102 days dry) Although one of the very best baking beans, TRC can be a difficult seed crop to mature, especially finicky in cool moist seasons. Despite a dry fall, CR's weren't dried down till Oct. 6 in Zone 5 Colrain, MA. Garden writer Michele Owen, author of *Grow the Good Life*. says, "I love chili, and True Red Cranberry beans cook up creamy without disintegrating with a richer flavor than any other red bean I've ever tasted." Inspired by a description of "Red Cranberry" in a 1700s gardening encyclopedia, legendary bean collector John Withee, after an 11-year search, finally obtained it from Mr. Taylor of Steep Falls, ME. The plump round maroon seeds without streaking look like Thanksgiving cranberries, unlike the speckled oval bush cranberry types. One of our oldest varieties, probably Native American, True Red Cranberry is listed on Slow Food's Ark of Taste. Soak seeds for 24 hours to aid germination. IR ①



A=1oz, $2.80
B=2oz, $4.60
C=8oz, $16.00
D=1lb, $28.00
E=5lb, $130.00

Poles for Pole Beans: CR used four-legged tipis for staking for years. Gloria Seigars of New Sweden, ME, employs tall limber ash saplings that can be bent double without breaking. "Wired together, several of them make a nifty arbor and grand entrance to the vegetable garden." Will Bonsall suggests letting them climb sunflower stalks (give the sunflowers a 2-week head start).
Plant ~5 seeds to a tipi, or 2 to a sunflower.

Gleanings from our Seed Growers (part 1)

Beth Rasgorshek, of Canyon Bounty Farm in Idaho, comes from a lineage of farmers. Her great grandmother was a market farmer in Omaha and her grandfather a wheat-seed farmer in western Nebraska. Her dad, who moved to Idaho before the days of chemical intensive agriculture, expanded beyond the typical wheat to grow onions, carrots and beans.

But when Beth came of age she left all this, headed west to Oregon and became a journalist. Eventually, feeling the need for a change, she took a Master Gardener's class followed by work on a CSA farm. She was ready to head home to Idaho, though knowing she didn't want to farm veggies. Canyon Bounty is in the Treasure Valley, aptly named, though the original intent was an advertising ploy by the railroad to attract settlers. But the true treasure is the seed. With the area's water, heat, no disease pressure and lots of sun, it's an ideal place to grow seed. Lots of other people farm seed there, in 40 acre grids, laid out in the 20s when they brought in irrigation from the mountains.

"I fell into this by coming home," Beth said. "I came back to seeds. I lived in a region growing seed crops and it's what my family knows." That family knowledge helped minimize rookie mistakes. Plus the National Organic Standards had just finalized their seed rules, so it was a good time for an organic seed farmer to step into the breach.

Beth now farms about 7 acres with 12 to 15 crops. When asked which is her favorite she quips, "Whatever I am eating now." And her least favourite? "Lettuce." She grows on flat land and the inevitable wicked wind comes through and shatters the seed at peak harvest and "it's hard to muster reactionary energy."

On the day we spoke, Beth was in the process of harvesting peppers with friends who had come to help scoop out the seeds and who would go home with a couple hundred peppers to roast. She also has access to a regional seed infrastructure that provides labor crews. For 20 years she's worked with the same four sisters, sharing meals, getting caught up. "They work hard, they know how to organize themselves and so they're very efficient. And they're good company." In addition, Beth is a huge proponent of combines, using one every chance she gets. "Equipment, for me, creates efficiencies and I'm grateful as much for that as for friends scooping out seeds."

When asked about the challenges she answers, "I'm not a botanist. I'm trying to figure it out as I go. And if I can't get [the information I need] from the Land Grant, where do I go?" Moreover, Beth is growing organic seed in a state that is overwhelmingly conventional, chemical, and corporate in its seed production. "The organic industry is still growing, still learning lots… about varieties…and what gardeners need…and the needs of organic farmers." The organic growers in Idaho are a small cadre, isolated by distance, and so they stay in touch to prop each other up, with support, equipment, advice.

Her advice about growing seed: "Just do it. Every gardener should save one seed crop. It's magical—nature doing what it should be doing and you get to select for what you want. The cuke that your grandpa introduced you to, that you want to give to your grandchildren, you keep it going." And to farmers she advises, "Plant the pollinators—for the pollinators themselves. Plus you get the bonus of a good pollination of your crop."

Beth follows her own advice: "I plant something new every year to keep it exciting, and right now it's flowers. I farm so I can look at insects."

FAVA BEANS *Vicia faba*

Avg 35 seeds/2oz pkt, 280 per lb. Also called broad beans and horse beans.
Culture: Favas tolerate frost, but do not thrive in hot weather. Unlike other beans, so don't wait; sow the large seeds 3–4" apart as early as peas. Harvest when the 2–3 light green beans in the 3–6" glossy pods reach the green shell stage.

Windsor (75 days) Bush type. The classic heirloom variety, listed by Fearing Burr in *Field and Vegetable Gardens of America* in 1863. We sell about a half ton of these each year. Brown seed.

298WI Windsor ③
A=2oz, $2.00 **B**=8oz, $6.00
C=1lb, $9.00 **D**=5lb, $26.00
E=10lb, $50.00 **K**=25lb, $100.00
L=50lb, $175.00

299WO Windsor OG ③
A=2oz, $3.30 **B**=8oz, $10.00
C=1lb, $16.00 **D**=5lb, $75.00
E=10lb, $140.00 **K**=25lb, $300.00

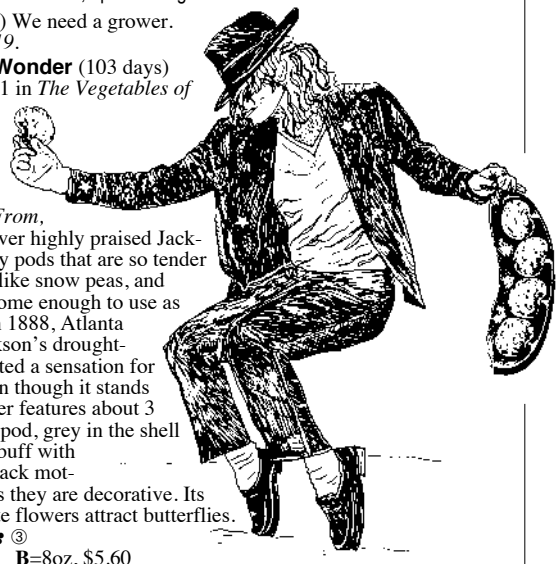
Melanie Edwards of Eastport, ME, advises: "If you cook them fresh-picked they need to be parboiled only 1–2 minutes in lightly salted water. If they have been in the refrigerator a while, give them a minute more. Utterly delicious when a small bit of the cooking water is eaten with the bean. Gently break open the seed casing with your front teeth and squeeze out the inside. Shelling your own as you eat them is similar to the difference between eating corn on the cob and whole kernel corn. No comparison."

Favas are mainstays in many cultures from ancient Rome to modern-day Mexico, Brazil and India. Rich in fiber and iron and highest of all beans in protein.

LIMA BEANS *Phaseolus lunatus*

Culture: Lima beans require more heat than green beans and are indifferent performers in cold wet summers. Plant as for other bush or pole beans. Harvest when the beans bulge inside their pods.

Minimum soil temperature 60˚, optimal range 70-85˚.

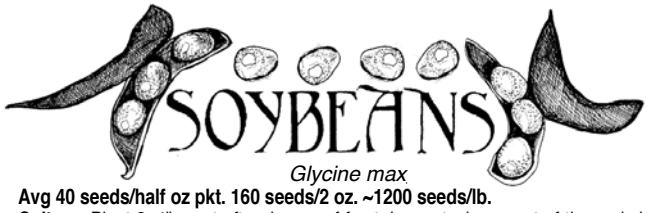


Packers (100 days) We need a grower. *Not available in 2019.*

324JW Jackson Wonder (103 days) U.P. Hedrick in 1931 in *The Vegetables of New York* called it "the hardiest of all **bush** limas, very productive." In his *100 Vegetables and Where They Came From,* William Woys Weaver highly praised Jackson Wonder for baby pods that are so tender they can be cooked like snow peas, and mature beans handsome enough to use as beads. Introduced in 1888, Atlanta farmer Thomas Jackson's drought-tolerant variety created a sensation for its productivity, even though it stands only 18" tall. Wonder features about 3 seeds per curved 3" pod, grey in the shell stage and drying to buff with lovely purple and black mottling, as succulent as they are decorative. Its sweet-smelling white flowers attract butterflies. Avg 950 seeds/lb. ✿ ③
A=2oz, $1.90 **B**=8oz, $5.60
C=1lb, $8.00 **D**=5lb, $30.00
E=10lb, $40.00

325KG King of the Garden (106 days) Also known as Henderson's Leviathan, for those with a season long enough to grow **pole** limas. Developed from a cross between Large White and Dreer by Frank S. Platt in 1883. Platt selected five- and six-seeded Large White pods so that King's long flat 8" pods dependably produce at least 4 large creamy-white seeds of splendid quality over an extended harvest period. Gregory called them the standard late pole lima and advised in his 1917 catalog that the plants are extremely vigorous so that "no more than two should be allowed to grow to a pole." Indeed, the vines can grow 10' high on fertile ground! *Caution: Not adapted to northern areas.* Avg 480 seeds/lb. ③

A=2oz, $2.00 **B**=8oz, $6.00
C=1lb, $9.00 **D**=5lb, $30.00
E=10lb, $50.00



Glycine max

Avg 40 seeds/half oz pkt. 160 seeds/2 oz. ~1200 seeds/lb.
Culture: Plant 3–4" apart after danger of frost; harvest when most of the pods have expanded but are still green without yellowing. For best flavor harvest in the evening.

483BF Beer Friend (83 days) Steam these up and crack open a home brew! Growing vigorously on lush robust 2½–3' vines, they were quicker to size up and grew bigger pods than the other eight varieties we originally tried, without sacrificing any flavor. They held their quality over a fairly long picking window. Enjoy them in August with fresh-picked corn and new potatoes, with or without a cold one. ⑤
A=½oz, $2.80 **B**=2oz, $8.00 **C**=8oz, $30.00 **D**=1lb, $55.00

489UO Sumo OG (87 days) We fell in love with its voluminous production of two- and three-beaned yellow-green pods, ripening early September in our 2014 trial. The towering 42" plants hung abundantly with pods and produced 3 heavy pickings over a 10-day window. Its nutty sweet milky goodness out-tasted 4 other contenders and shines best when steamed for 7 minutes, then served warm from the pot. ①
A=½oz, $2.50 **B**=2oz, $7.00

490TK Tankuro (90 days) In Japan, black-seeded edamame varieties are deemed to have a richer and sweeter flavor than the traditional green or tan kinds. Tankuro was the winner for productivity and pleasing flavor in our initial trial to find the best black-seeded variety. In exceptional heat, our May 25 planting produced robust 3' plants loaded with pods packed with an average of 2.4 beans each. They began ripening Aug. 17, the same day as Shirofumi. Harvest would be 1–2 weeks later in a season with average heat. Pick promptly when the immature seeds are bulging yet the pods are still dark green, before the plants begin to yellow. Those pods that you miss will dry down, maturing beautiful black pearls that can provide your next year's planting stock. ②
A=½oz, $2.50 **B**=2oz, $7.00 **C**=8oz, $24.00 **D**=1lb, $40.00

Shirofumi (91 days) Vigorous thigh-high vines make early concentrated sets of light green pods, averaging two beans per pod. The 10-day picking window is generally from late August through early September. An excellent substitute for limas in short-season areas. Our stock seed came from Tom Vigue, who has done considerable trials and selection work with this crop. Resists ANTH, CBMV.

482SF Shirofumi ②
A=½oz, $2.20 **B**=2oz, $6.00 **C**=8oz, $20.00 **D**=1lb, $32.00
E=5lb, $125.00

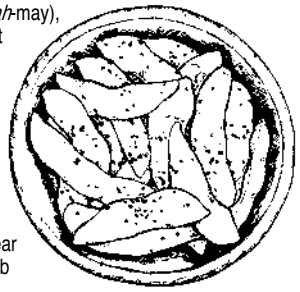
491FO Shirofumi OG ①
A=½oz, $2.20 **B**=2oz, $6.00

Sayamusume (92 days) Another crop for which we seek a grower. *Not available in 2019.*

493MO Giant Midori OG (93 days) Ripens right after Sayamusume for Roberta, but staggers its crop in three pickings, ideal for home gardeners. As its name implies, not compact but instead 3–6" taller than Shirofumi. Also a heavier cropper laden with fat pods each filled with 2–3 very sweet buttery beans that "seemed to hold in the field better without yellowing," according to Melinda Fields of Turtle Ledge Farm in Hampton, CT. Despite its lateness, Fields implored us to keep listing it. Recommended for both home enjoyment and commercial production as well as for feeding your woodchucks. ①
A=½oz, $2.80 **B**=2oz, $7.30 **C**=8oz, $14.00 **D**=1lb, $23.00

799SB Soybean Inoculant For soybeans and edamame. In home gardens, moisten the seed slightly and sprinkle on inoculant, then plant.
A=treats 50lb, $6.30

The Japanese call them *edamame* (eh-duh-*mah*-may), meaning 'beans on branches,' and boil and salt them like beer nuts. Edamame are rich in vitamins A, C and E, calcium, phosphorus, protein and fiber. Encouraged by their recent popularity, breeders are selecting for larger pods with sweeter beans.



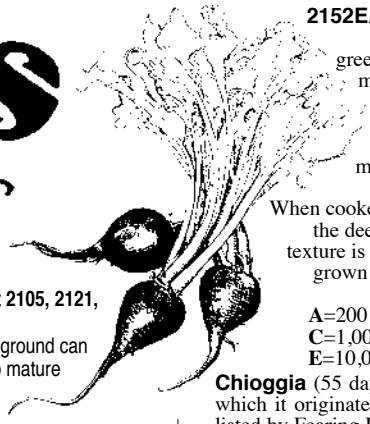
Steam or boil the pods for 4–5 minutes, chill quickly for easy shelling. Refrigerate the leftover beans immediately.

Fresh-market growers often cut off plants near the base, remove the leaves and bunch into 1 lb units, rather than pick each pod individually.

Good companions: Seedsman Tom Vigue plants edamame in the same furrow as his sweet corn. He thins each to one plant per row foot and suffers little yield loss from either crop: the soybeans are a gift. He sows a living mulch of forage radish that takes off after both main crops are dead. He follows the next year with potatoes, which benefit in rotation from all three of these crops.

beets

BETA VULGARIS



Avg 2200 seeds/oz, with variations (extreme exceptions noted in descriptions).
⅛ oz packet sows 20 ft; 1 oz, 160 ft. All open-pollinated except 2105, 2121, 2126, and 2152.
Culture: Hardy and easy to grow. Can be sown almost as soon as ground can be worked. Thin by harvesting greens with baby beets. Beets left to mature to full size should be at least 3" apart. Minimum germination temperature 40˚, optimal range 60–85˚.
Diseases: CLS Cercospora Leaf Spot PM Powdery Mildew DM Downy Mildew

CLS looks like someone shot a series of small target-like circles in the foliage. Prolonged periods of rainfall and high humidity exacerbate this disease. In serious cases the spots darken and extend. Rotating crops, removing plant debris, and wider spacing to ensure adequate air circulation are preventive measures.

Scab, the same disease that afflicts potatoes, causes rough brown spots on the skin. Adequate irrigation is a preventive.

Days to maturity are from date of seeding.

2105RB Robin (40 days) F-1 hybrid. Of baby-beet class and short-top type, Robin's vigor and health put wimpy competitor Babybeat to shame. This Boy Wonder's 10" tops show nice contrast between dark red stems and disease-resistant dark green leaf. Add deep red 1–2" round beets, and Robin packs a visually powerful punch, …I mean bunch, at market. Even better, its uniformity and ability to hold size makes harvesting a mess of beets quick and easy. True to New England tradition, I steamed mine up whole, tops and bottoms. Holy Diminutive Delights! Again besting Babybeat, Robin's full sweet beet flavor and fine-grained solid red interior was a revelation in taste and texture. ⑤
A=⅛oz, $2.20 **B**=½oz, $4.00 **C**=1oz, $6.50 **D**=4oz, $16.00 **E**=1lb, $56.00

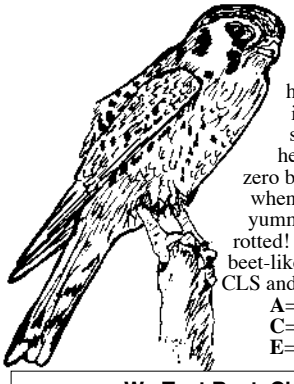
Early Wonder Tall Top (48 days) The beet that can't be beat in our customers' estimation, loved by commercial growers and home gardeners alike. We sell more than 5,000 packets per year. Selected for earliness from Crosby's Egyptian and introduced in 1911. Quick emergence in cold soil and attractive purple tops make Wonder the choice for early beet greens and bunching beets. In their 1916 catalog F.H. Woodruff & Sons of Medford, CT, claimed to be the largest beet-seed growers in the U.S. and the originators of Early Wonder.

2108EW Early Wonder Tall Top ②④
A=⅛oz, $1.30 **B**=½oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $5.00 **E**=1lb, $11.00 **K**=5lb, $50.00

2109WO Early Wonder Tall Top OG ③
A=⅛oz, $1.70 **B**=½oz, $2.50 **C**=1oz, $4.50 **D**=4oz, $10.00 **E**=1lb, $30.00 **K**=5lb, $120.00

2121RO Red Ace OG (50 days) F-1 hybrid. Sweet early-season beet with purple tops. Market growers appreciate its uniformity and perfect shape, very similar to Early Wonder but more refined. We are well-stocked so there won't be any early backorders. Tolerant to CLS. Avg 1100 seeds/oz. ⑤
A=⅛oz, $2.50 **B**=½oz, $6.00 **C**=1oz, $10.00 **D**=4oz, $32.00 **E**=1lb, $120.00

2126KE Kestrel (23-35 days baby; 55 days full size) F1-hybrid. Newly released veggie varieties are often touted for their "dual-purpose" potential, but much of this verbiage falls flat in our hardy Maine trial program. Kestrel beet is an exception, meeting and possibly exceeding the quality of elder sibling Red Ace. In the early baby and summer crop, vigorous healthy greens top elegant uniform heart-shaped roots. The tender deep red interior was mild and sweet even after 2018's dry scorching June. Come fall, full-size rounded-heart roots develop sweet deep full flavor with zero bitter sharpness. Triple-happiness is complete when Kestrel emerges from long storage firm and yummy after other beet varieties have wrinkled or rotted! New last year, Kestrel is now perched in our beet-like hearts. Intermediate resistance to DM, PM, CLS and rhizoctonia. ⑤



A=⅛oz, $2.50 **B**=½oz, $5.00 **C**=1oz, $9.00 **D**=4oz, $28.00 **E**=1lb, $84.00

We Test Beet, Chard, and Sweet Corn Seed for Transgenic Contamination
To help ensure the purity of our seed we test samples of our beets, chard and sweet corn lots for the presence of GMOs. More information on page 19.

2152EA Eagle (25-35 baby, 55 days full size) F-1 hybrid. Of the Early Wonder class with quick root growth and tall bright green tops, Eagle soared in our 2018 summer beet trials. While many OP and hybrid comparisons struggled to size up in the early dry heat, steady vigorous Eagle bore bunch-worthy round baby beets with proud tops. Later, when humidity brought rampant Cercospora leaf disease that eliminated many trial-mates from consideration, Eagle, Kestrel and Red Ace glided through to maturity with nary a spotted leaf. When cooked, Eagle's dark red globes turn a solid dusky crimson with the deep red inside showing only slight hints of zoning. Taste and texture is perfect: simply sweet and smooth, no bitterness even when grown in stressful conditions. For fresh summer use; not for long storage. Very high resistance to bolting. ⑤ **NEW!**
A=200 seeds, $1.60 **B**=500 seeds, $2.00 **C**=1,000 seeds, $3.00 **D**=5,000 seeds, $12.00 **E**=10,000 seeds, $16.00

Chioggia (55 days) Also known as Bassano, for the Venetian hill town in which it originated. Has been cultivated in the States since the 1840s, was listed by Fearing Burr in 1863, and offered by Vick's for 75¢ per lb in 1877. Beautiful when sliced, this heirloom home-garden type attracts attention in the kitchen with its alternating interior rings of pink and white. Noteworthy also for its light red exterior color, green tops and exceptional sweetness. It loses quality when it gets large.

2136CH Chioggia ②
A=⅛oz, $1.70 **B**=½oz, $3.00 **C**=1oz, $4.50 **D**=4oz, $10.00 **E**=1lb, $26.00

2137CO Chioggia Guardsmark OG ⑤
A=⅛oz, $2.50 **B**=½oz, $6.00 **C**=1oz, $9.00 **D**=4oz, $26.00 **E**=1lb, $100.00

2156CY Cylindra (56 days) Also known as Forono and Formanova, a long smooth regular cylindrical beet, growing to 7", dark red, sweet and beety. Highly marketable and not at all woody, in the words of one trialer, "a fine all-around beet suitable for baking, cooking, and pickling." Roberta rates them the darkest and least fibrous of our beets. Roots will push up out of the ground and develop rough shoulders. Heirloom from the 1880s, originally from Denmark. Avg 3000 seeds/oz. ②
A=⅛oz, $1.40 **B**=½oz, $2.30 **C**=1oz, $3.50 **D**=4oz, $6.00 **E**=1lb, $18.00 **K**=5lb, $80.00

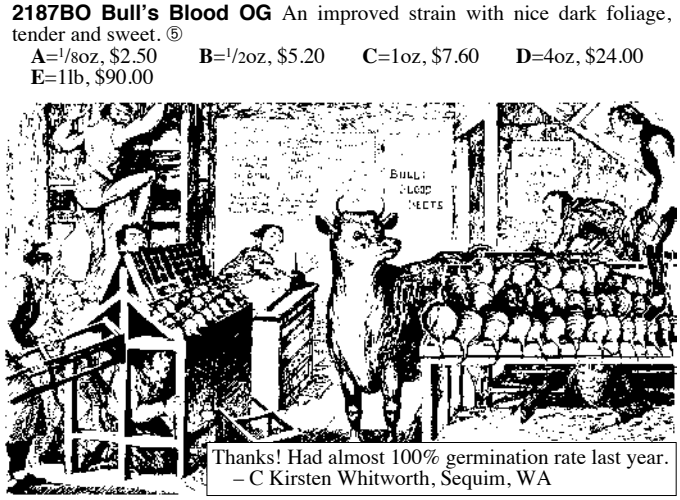
Lutz Green Leaf (60 days) Germination was uncertain at press time. Check the web for availability.

2182DD Detroit Dark Red (60 days) "New varieties come and go, but the Detroit Dark Red, year after year maintains its popularity and holds its place right at the top of the list of good midseason varieties," asserted Stark Bros. catalog in 1921. Introduced 1892 and still the standard late variety for home gardeners and canners. Globular smooth uniform beets with tender oxblood-red flesh. Among the several strains of this century-old variety, this one had the best roots in our evaluation. Avg 3000 seeds/oz. ②④
A=⅛oz, $1.30 **B**=½oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $5.00 **E**=1lb, $14.00 **K**=5lb, $60.00

Bull's Blood (60 days) Prized for its spectacular leaves, not its rough flattened globe-shaped roots. Runaway winner of the 26 varieties in our beet greens trial years back, sweet and nutty with never a hint of oxalic aftertaste, it again received high praise from our tasters more recently. Also a winner in appearance, with large glossy reddish-purple leaves. No bull, it holds quality all summer, with color intensifying as it grows, especially under cool conditions in fall or under winter cover. Bull's Blood is Eliot Coleman's red leaf of choice for winter harvest salad mixes (see p. 230 of *The Winter Harvest Handbook* **9822**). Old variety; its name hints of 19th-century origins when beets were known as blood turnips. Selected around 1840 from the French variety Crapaudine for darkest-colored leaves.

2186BB Bull's Blood ②
A=⅛oz, $1.60 **B**=½oz, $2.60 **C**=1oz, $4.50 **D**=4oz, $10.00 **E**=1lb, $28.00

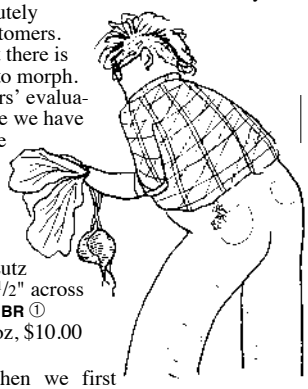
2187BO Bull's Blood OG An improved strain with nice dark foliage, tender and sweet. ⑤
A=⅛oz, $2.50 **B**=½oz, $5.20 **C**=1oz, $7.60 **D**=4oz, $24.00 **E**=1lb, $90.00



Thanks! Had almost 100% germination rate last year. – C Kirsten Whitworth, Sequim, WA

BEETS of Unconventional Colors

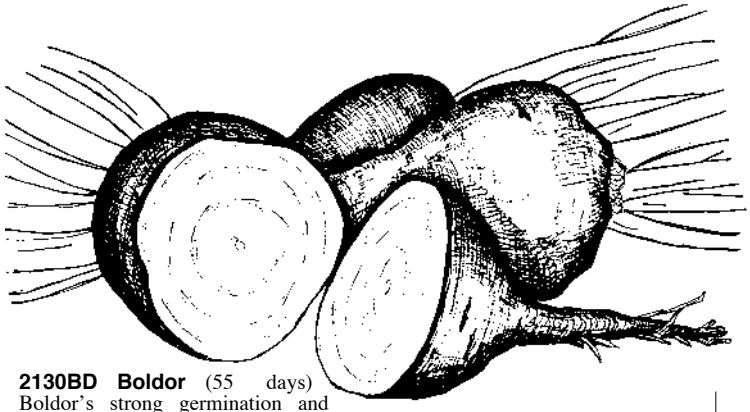
2128GO 3 Root Grex OG (54 days) The genius of Alan Kapuler at work, this is an interbreeding mix of three heirlooms: Yellow Intermediate, Crosby Purple Egyptian and Lutz Saladleaf that absolutely wowed us and continues to get raves from customers. Grex, a term from orchid breeding, means that there is variation within this gene pool that continues to morph. It also means more disagreements in our trialers' evaluations than for most of our selections. Over time we have noticed the extent of variation decrease and the flavor improve. There are three distinct colors in this gene pool: a **pinkish red** with some orange in it, a bright **gold**, and a beautiful iridescent **orange**. We were impressed by the unusual vigor, glowing colors and length of these gradually tapered elongated roots. The Lutz influence manifests in their size, as much as 3 1/2" across and 7–8" long. Also produces copious greens. **BR** ①



A=1/8oz, $2.50 **B**=1/2oz, $6.00 **C**=1oz, $10.00 **D**=4oz, $30.00 **E**=1lb, $90.00

2129LO Golden Grex OG (54 days) When we first trialed Alan Kapuler's 3 Root Grex in 2004, we loved its **golden** strain so much that we decided to select it out. It debuted in our catalog in 2009, and we quickly sold out of our five pounds of seed. What with the vagaries of biennial seed production, it was seven long years before we had it to offer again. This time our appreciative customers gobbled up more than 50 lb of seed. Those who love 3 Root Grex will be utterly enchanted. Golden Grex has Lutz in its parentage, as manifested by its green tops, lush growth, somewhat elongated Lutz shape and enormous roots that remain mild and sweet even as they grow up to 6–7" long and 3 1/2" wide. Roots are golden orange with a blushed orange hip on the top of the beet. Some, but not all, interiors will have beautiful alternating concentric rings of yellow and red similar to a Chioggia. The stems retain some golden coloration. ①

A=1/8oz, $2.50 **B**=1/2oz, $6.00 **C**=1oz, $10.00 **D**=4oz, $28.00 **E**=1lb, $86.00



2130BD Boldor (55 days) Boldor's strong germination and vigor roars to life more quickly than the other yellow beets, making it easier to grow, especially under stressful conditions. Its excellent uniform round **rose-gold** roots have duped many into mistaking it for a hybrid. When cooked, Boldor's meat becomes fully light orange with no striations, a blend of carroty sweetness and mild beety depth. Touchstone's flesh color may have more pop, but many of us favored Boldor in taste tests. And it's hard to top its tops: Boldor has healthy short upright light green tops with gold stems and veins. ④

A=1/8oz, $2.70 **B**=1/2oz, $7.00 **C**=1oz, $13.00 **D**=4oz, $38.00 **E**=1lb, $130.00

2144GO Golden Detroit OG (55 days) Sweet and delicious vibrantly **golden** beets with delicious greens. Better size, vigor, taste and disease resistance than Burpee's Golden Beet. Despite its name, does not have the classic round Detroit shape. Instead, more elongated like a pyramid. No green shoulders. ③

A=1/8oz, $2.10 **B**=1/2oz, $6.00 **C**=1oz, $9.00 **D**=4oz, $32.00 **E**=1lb, $120.00

2149TO Touchstone Gold OG (55 days) A refined and reliable **golden** beet with long attractive green tops, Touchstone takes the guesswork out of growing golden beets. Market growers love its dependable germination and uniformly round roots that resist zoning. Like other golden beets, retains its color when cooked and has the sweet flavor prized by aficionados. Avg 1350 seeds/oz. ⑤

A=1/8oz, $2.40 **B**=1/2oz, $6.50 **C**=1oz, $11.00 **D**=4oz, $36.00 **E**=1lb, $125.00

This is the most value for money I get all year. Thanks for keeping the prices so reasonable. I am always happily surprised to see the total for all of these wonderful seeds being as low as it is!
– Gina Qualliotine, Chatham, NY

Broccoli

Brassica oleracea (botrytis group)

~100–300 seeds/g. Average varies by cultivar.

Culture: Start broccoli indoors March–May for setting out May–July, or direct-seed in May, or in June for fall crop. Easier as a fall crop because many varieties perform poorly in hot summers. For better stands in dry conditions sow in trenches and keep irrigated. Broccoli dislikes the extreme temperature and moisture fluctuations we have endured in recent seasons. Climate change is making it a challenge to grow even the more heat-tolerant varieties in the summer, while at the same time broadening opportunities in our longer more temperate falls.

Diseases: See the chart on page 13.

Days to maturity are from direct-seeding; for transplants, subtract 20 days.

Note: because of a rule issued by Oregon, we cannot ship brassica packets larger than 1/2 oz (14g) into the Willamette Valley, except those that have tested negative for Black Leg and Black Rot. Our information at press time is in the descriptions here; please check our website for updates.

3326BB Broccoli Blend (67-95 days from transplant) A mix of varieties in one packet for home gardeners who want broccoli to mature over a long season. Begin your harvest with Tendergreen and carry through to Umpqua without having to purchase a full packet of each. Varieties in the mix change with availability, but no Romanesco or Piracicaba. ①③⑤

A=0.5g, $2.40 **B**=1g, $4.00 **C**=4g, $11.00 **D**=14g, $28.00

3303TG Tendergreen (67 days) F-1 hybrid. Vermont grower Altoon Sultan calls this a "wonderful early broccoli." Not stalwart in extreme heat. Up to a week earlier than Packman's flat-top with a better looking 6–7" semi-domed head. Heads are lighter weight than the later-season varieties. The medium-large beads do a good job of shedding water. Pleasing blue-green color, tender and delicious flavor. Modest 2–3" (occasionally 4") side shoots follow. ③

A=0.5g, $2.10 **B**=1g, $3.50 **C**=4g, $8.00 **D**=14g, $15.00 **E**=28g, $28.00

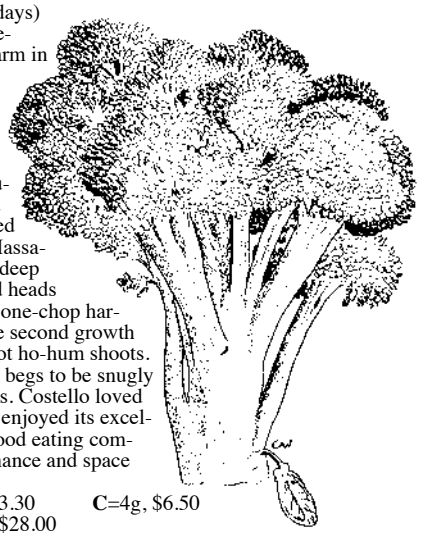
3304LM Limba (70 days) Open-pollinated. A good home-garden variety with light blue-green 8" semi-domed heads, medium beads, good flavor and texture, and decent production of side shoots. Does not perform well in heat. We thank staffer Michele Hansen who unearthed the Czech seed company who supplies us with this gem. ③

A=2g, $1.80 **B**=4g, $3.00 **C**=14g, $8.00 **D**=28g, $14.00

3306SO Solstice OG (71 days) Open-pollinated. Has rapidly gained a following. Its tall leggy plants gave it its alias Oregon Long Neck. Donna Dyrek harvested her first trial head in 2012 right on the summer solstice from an April 11 start. Its mild sweet heads, at 4–5" across, are intermediate between **3327** Piracicaba's and those of the domed hybrids. Among the half dozen open-pollinated broccolis in our trial, Solstice was the most uniform and the sweetest, smaller in the summer and tastier in the fall even though they turn purple in frost. Solstice is more noted for its zillion side shoots that follow the main head. Best suited as a fall crop. Ω ① **BACK!**

A=0.5g, $1.90 **B**=1g, $3.00 **C**=4g, $5.50 **D**=14g, $12.00 **E**=28g, $20.00 **K**=112g, $70.00

3309GS Green Super (85 days) F-1 hybrid. Renowned for side-shoot production. At PEAS Farm in Missoula, MT, farm caretaker Ellie Costello deemed this midseason broccoli "phenomenal." Despite challenging weather fluctuations, Green Super came through with beautiful long-holding 7" wide and 3" deep domes. Has also looked good in midsummer both in Massachusetts and Maine. Holds its deep green pound-plus tight-beaded heads above splayed leaves for easy one-chop harvest. After the primary cut, the second growth creates vigorous side heads, not ho-hum shoots. Super's healthy compact form begs to be snugly planted in efficient successions. Costello loved "Super Broc" roasted, and we enjoyed its excellent flavor and texture raw. Good eating combined with exemplary performance and space saving. ③



A=0.5g, $2.00 **B**=1g, $3.30 **C**=4g, $6.50 **D**=14g, $16.00 **E**=28g, $28.00

Disclaimer: The broccoli seed we offer is seed grade, and it is not fit for human consumption as sprouts. It is not stored in food-safe sanitary conditions before it reaches us. For sprouting seed, please contact your natural foods supplier.

3311GK Green King (85 days) F-1 hybrid. Exceptionally tender, King has reigned in our broccoli taste tests for more than 20 years. It also scores high for its consistent yield of high-quality blue-green domed 8" heads with rather large beads. Market growers appreciate its healthy vigorous plants and uniform ripening. Side shoots are big enough to be marketable but not plentiful. Tolerates some heat, although not a midsummer monarch. Tested negative for BR and BL. ③

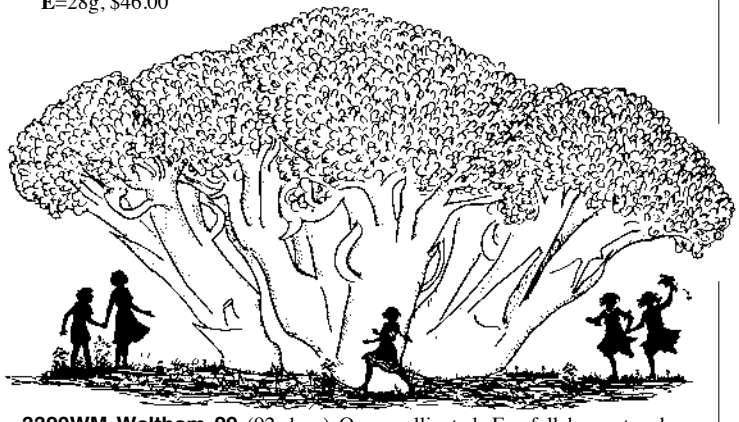
A=0.5g, $2.10 **B**=1g, $3.50 **C**=4g, $8.00 **D**=14g, $17.00

3313BM Bay Meadows (89 days) F-1 hybrid. Superb performance in hot conditions! Well-domed 6–8" heads with blue-green beads atop strong plants. The famous Bay Meadows Handicap was twice won by Seabiscuit. If your broccoli program is handicapped in the heat, Bay Meadows is your best bet for summer broccoli. "Another leap in productivity, beautiful dark green heads," praises Alan LePage. It was the lone survivor in our 2018 summer broccoli trial after the cold drought of May slammed into a scorching June. Other varieties buttoned up, developed weird misshapen heads or otherwise melted down. Performed well for Adam Tomash and June Zellers in the very hot 2012 midsummer, ripening "without a hiccup" and with great taste and appearance. If you sidedress plants after cutting the main heads, they will give robust side shoots huge enough to pass as main heads, says LePage. If you'd have bet on Seabiscuit, bet on Bay Meadows. Tested negative for BR and BL. ⑥

A=0.5g, $2.70 **B**=1g, $3.60 **C**=4g, $9.00 **D**=14g, $20.00
E=28g, $35.00

3315GY Gypsy (91 days) F-1 hybrid. Gypsy has in common with its namesakes the ruggedness to thrive in many different environments—holds up reasonably well in the heat of summer, the cool of autumn, and in less-than-stellar soil. A reliable producer of medium-green large domed 8" heads with medium-tight beads that shed water well. Very uniform, very consistent. Stems and plants capable of growing massive; Adam Tomash harvested one head weighing 2.7 lb. From a May 15 indoor start, he cut his first main head on Aug. 14. Donna Dyrek's was a little later on Sept. 2. Our trialers rate its flavor as excellent, sweet and tender. Sparse producer of side shoots. This variety is produced by cell fusion. Although considered a form of genetic engineering in Europe, the cell fusion technique used to breed Gypsy does not employ recombinant DNA technology. The NOP ruling that cell fusion used as part of traditional breeding techniques may be permitted in organic production opened the door to our listing Gypsy. Tested negative for BR and BL. Tolerant to DM. ⑤

A=0.5g, $2.50 **B**=1g, $3.80 **C**=4g, $9.50 **D**=14g, $25.00
E=28g, $46.00



3320WM Waltham 29 (92 days) Open-pollinated. For fall harvest only. Developed in 1951 and long considered the standard OP fall broccoli. We've found a reliable strain that consistently produces 6" heads with medium beads on attractive stocky 20" plants. Waltham delivers good-sized central heads, but no side shoots. *Caution: not suitable for summer crops; will not head properly in heat.* ②

A=2g, $1.00 **B**=4g, $1.60 **C**=14g, $3.00 **D**=28g, $4.00
E=112g, $6.00 **K**=448g, $16.00

3322AR Arcadia (94 days) F-1 hybrid. Once Vermont grower Alan LePage's favorite summer broccoli, he still regards workhorse Arcadia "a great variety for wonderful first heads." Big rugged Arcadia rocks in conditions that reduce other broccolis to compost, standing up not only to some heat, but also to rot, mildew and cold stress. Arcadia's gently mounded dome-shaped frosty bluish-green heads of very refined small beads are consistently marketable and hold a long time. Tested negative for BR and BL. ⑤

A=0.5g, $2.20 **B**=1g, $3.80 **C**=4g, $10.00 **D**=14g, $24.00
E=28g, $45.00

3325UO Umpqua OG (95 days) Open-pollinated. For fall harvest only. Handsome uniform dark-green 5–8" heads with large beads size up quickly. A great producer of abundant side shoots will provide a long harvest window. Excellent taste along with stress-tolerance make Umpqua an ideal home-garden variety for the fall. Developed in 1990 by Tim Peters, gets its name from the Umpqua River in Oregon. Tested negative for BL. BR ①

A=2g, $2.50 **B**=4g, $4.20 **C**=14g, $10.00 **D**=28g, $16.00
E=112g, $48.00

Non-Heading Broccoli

3327PC Piracicaba (56 days) Open-pollinated. This broccolini type has garnered many accolades. Several growers prefer its flavor to that of hybrid broccoli and noticed their customers increasingly choosing it instead. "People were buying four or five bunches at a time and I couldn't bring enough to market," observed Carol Thomas of Sweet Briar Herb Farm in Onalaska, WA. About halfway between a heading broccoli and a broccoli raab, these succulent tender small green heads with very large beads make delightful raw eating. Very loose heads, lots of side shoots, sweet stalks. Even the fairly large leaves make excellent greens. Garden writer Barbara Damrosch found it delicious steamed. Alan LePage says sidedressing it in the summer yields great cuttings in the fall. NY State trialers report it is best as a fall crop with relatively good frost tolerance. Remarkably, it was bred in Brazil in the city of Piracicaba (peer-a-SEE-cah-bah) to withstand heat. ②

A=2g, $2.60 **B**=4g, $4.60 **C**=14g, $10.00 **D**=28g, $16.00
E=112g, $50.00 **K**=448g, $180.00

3328BU Burgundy (75 days) F-1 hybrid. We became enamored of this Bejo Seeds sprouting type when our summer trial of standard green-headed broccoli was torched by dry heat. In contrast, Burgundy's huge and healthy green plants built loose central crowns of indigo that slowly spread to long green-stemmed spires topped with namesake-colored stand-alone florets. Over 3 hot weeks, Burgundy allowed steady harvests for our trial tasters. "LOVE this!" was the unanimous refrain when they enjoyed the tender sweet green stems and dark sprouts both raw and lightly steamed. A further fall trial showed even better lasting production and flavor. Burgundy's broad temperature tolerance lends itself to succession transplanting from very early spring through late summer for savvy gardeners and market growers. ④ **NEW!**

A=20 seeds, $3.00 **B**=40 seeds, $5.40 **C**=100 seeds, $8.00
D=500 seeds, $35.00 **E**=1,000 seeds $65.00 **K**=5,000 seeds $300.00

3316PO Purple Peacock Gene Pool OG (92 days) Open-pollinated. Best grown for fall harvest, this gourmet ornamental edible is a cross by Frank Morton of a large green broccoli with two colorful kales. More uniform than previous iterations, yet still somewhat variable. Wavy-looking deeply cut purple leaves with rounded edges are punctuated by pink veins. The sweet broccoli flavor of the head and abundant side shoots are augmented by the kale-like qualities of the leaves, especially as fall delivers its first cold nights. An imposing plant 2½' tall, spreading 2–3' makes quite a spectacle. Purple leaves, stems and heads cook to a dark green or can be enjoyed raw in salads. Tested negative for BR and BL. Ω ①

A=0.5g, $1.90 **B**=1g, $3.00 **C**=4g, $5.50 **D**=14g, $12.00
E=28g, $20.00

See also Chinese Broccoli, Kailaan (GaiLan), in the Asian Greens on p. 30.

Romanesco Broccoli

One of the most beautiful of plants when grown well. Chef Odessa Piper called the cone-shaped somewhat irregular whorl of chartreuse florets "broccoli on acid."

Culture: Needs adequate spacing, a long season and extremely high soil fertility. Well-grown plants are huge and need about 10 sq ft each. Should be started indoors in March or April and transplanted out in late May or June. Be patient; needs a long season but doesn't mind cool weather.

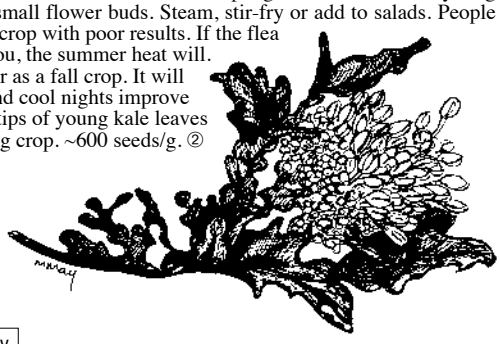
3329VR Veronica (98 days) F-1 hybrid. Fall production only. A reliable and refined version of Romanesco broccoli. Combining sweetness with a fine brassica zing, Veronica is tender and delicate as a crudité and quite flavorful cooked. First ripened Sept. 16-19, 2013, for trialer Donna Dyrek and was still producing in mid-October from a May 27 greenhouse start. The supplier claims average weight is 4 lb per head, but in conditions of high fertility and wide spacing, Dyrek's averaged 8" across and 5 lb. Resists purpling and red tipping during heat. Tested negative for BR and BL. ④

A=0.1g, $3.20 **B**=0.3g, $8.00 **C**=1.2g, $20.00 **D**=6g, $80.00

BROCCOLI RAAB *B. rapa* (ruvo group)

Days to maturity are from date of seeding.

3485QT Quarantina (40 days) Open-pollinated. *Quarantina* means '40 days.' Raab, also known as Rapini here and *Broccolo Asparago* in Italy, is a non-heading version of broccoli with a more pungent flavor. Harvest young stems, leaves and small flower buds. Steam, stir-fry or add to salads. People try this as a spring crop with poor results. If the flea beetles don't get you, the summer heat will. Raab is much better as a fall crop. It will hold a lot longer and cool nights improve the flavor. Tender tips of young kale leaves make a better spring crop. ~600 seeds/g. ②



A=2g, $1.60
B=4g, $2.50
C=14g, $4.60
D=28g, $7.50
E=112g, $16.00
K=448g, $48.00

Varieties organized within sections by days to maturity.

BRUSSELS SPROUTS

B. o. (gemmifera group) **~100-200 seeds/gram.**

Culture: Grow like broccoli but requires a longer season. Start indoors by early April and transplant into very fertile soil. Give each plant about 9 sq ft. Very hardy; flavor is improved by frost and sprouts can be harvested past the first snowfall. Top plants in early September to encourage sprout development.

Days to maturity are from date of seeding. Subtract 20 days for transplants.

3334HT Hestia (93 days) F-1 hybrid. If you have trouble growing decent brussels sprouts, here at last is a variety that is early and easy. Only the second brussels sprouts variety ever to win an All-America award (2015), Hestia was named for the Greek goddess of hearth and home. Though the award was for the Southeast and Mountain/Southwest regions, she proved extremely well-adapted to the Northeast where she thrived in CR's 2015 plots. Hestia claims the unusual distinction of both ripening early and holding its quality on the 24–30" tall plants. It doesn't succumb easily to disease. Develops higher sugars than most sprouts in warmer weather, making for succulent eating. A great variety to start the season, its 1" sprouts are medium size. Tested negative for BR and BL. ④

A=0.25g, $3.30 **B**=0.5g, $5.00 **C**=1g, $8.50 **D**=4g, $28.00 **E**=16g, $100.00

3339GU Gustus (99 days) F-1 hybrid. Steady sales increases have made Gustus our #1 brussels sprouts variety. CR's find from 2009, the coldest summer in forty years. He had never grown such robust brussels sprouts plants before or since. The late Michael Zuck of Bangor, ME, judged Gustus as "the absolute pinnacle of the brussels sprouts breeder's art. The quality of the sprouts is amazing, very dense and sweet. No other sprout compares with Gustus." The sprouts are medium-sized, slightly oval, remarkably uniform (perfect for market) and grow large farther up the stalk after the plants get topped. In 2009 they showed not a hint of rot, even after two hurricane rains. A representative sample of 10 weighed a respectable 6 oz. Won our taste test with its smooth texture and no cole-ish aftertaste. Enjoy them with gusto! Tested negative for BR and BL. ⑥

A=0.5g, $3.20 **B**=1g, $5.80 **C**=4g, $18.00 **D**=14g, $56.00 **E**=28g, $105.00

3341FS Falstaff (102 days) Open-pollinated. We loved the beauty of red varieties such as Rubine, but never could get a single sprout to mature until we found Falstaff. Falstaff is not only ornamental but also extremely savory. Cooking brings out its tender nutty sweetness while allowing it to retain bluish-purple pigments. It cooks quickly, though, so don't overdo it. Good production one year, only fair the next, sprouts with beautiful color, wide size variation, but most quite small compared to the green hybrids, and can be late coming. The color intensifies after a hard frost. The plants tend to sprawl. ③

A=0.5g, $2.10 **B**=1g, $3.20 **C**=4g, $8.00 **D**=14g, $16.00 **E**=28g, $30.00

3344DB Diablo (110 days) F-1 hybrid. Home gardeners have yet to give this devil its due. It might be a little slow getting going, but for those who have a long enough season, Diablo is dependable and productive. These are uniform good-looking solid medium-sized sprouts of good quality. A representative sample of 10 sprouts weighed 7 oz in our trial. CSA grower Jan Goranson recommended Diablo for its disease resistance and ability to produce a consistent sprout every time. Tested negative for BR and BL. ④

A=0.5g, $3.20 **B**=1g, $5.80 **C**=4g, $22.00 **D**=14g, $65.00 **E**=28g, $120.00

FEDCO'S BEST CABBAGE SEED.

B. o. (capitata group) **~150–350 seeds/g.**

Culture: Grow like broccoli. Exposure to hoarfrost is good for cabbages. They double their sugar content after one month of cold.

Days to maturity are from date of seeding. Subtract 20 days for transplants.

GREEN CABBAGE

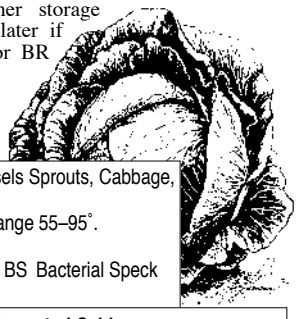
3352GA Golden Acre (62 days) Open-pollinated. The best choice for those preferring an early open-pollinated cabbage that's not a pointy-headed intellectual from Jersey. A selection of the Copenhagen Market type billed as "new…the earliest of the round-headed cabbages" in the 1928 Jerome B. Rice catalog. Grey-green heads, some with a faint reddish tint in the outer leaves, average 3–5 lb. Our trialers found them big, round and solid with white interiors. 75% of them were marketable. In this year's taste tests, our staffers gave them high marks as sweet and tender with spicy flavor that developed buttery undertones after cooking. Notes included several "yums" and one "*great*!" Short stems with sparse wrapper leaves and medium-sized core keep plants compact. Not long standing. ②

A=2g, $1.40 **B**=4g, $2.00 **C**=14g, $3.50 **D**=28g, $4.50 **E**=112g, $9.00 **K**=448g, $18.00

3355EJ Early Jersey Wakefield (63 days) Open-pollinated. This classic early cabbage originated in England in the early 1800s, was first grown in America in 1840, perfected by a German truck gardener in northern New Jersey and released by Peter Henderson in 1868. Henderson in 1902 asserted that "it was more largely grown than all other first early cabbages combined" and called it an "old reliable always to be depended upon for its uniformity in earliness and crop." Anne Elder considers it a great fall cabbage as well. Wakefield's compact medium 2–3 lb heads are distinctively pointy. The pyramidal shape with sparse outside foliage permits close spacing. Tender flavorful waxy-looking Wakefield has stood the test of the ages and is still prized by home and market gardeners. Shows some variation in our lot grow-outs. Not for storage. ②④

A=2g, $1.40 **B**=4g, $2.00 **C**=14g, $3.50 **D**=28g, $4.50 **E**=112g, $9.00 **K**=448g, $18.00

3365TG Storage #4 (80 days) F-1 hybrid. Our first trials of this dark green 4–8 lb cabbage were more than two decades ago, but #4 has stored well in my memory ever since, and not on account of its catchy name! The physical cabbage won't store as long as my memory of it did, but it will be firm and edible come spring and with much better flavor than typical supermarket fare at that season. Marie Merkel of Surry, ME, thanks us for adding it: "Never splits—still crisp and tasty next July." Delicious solid head holds well during the weather stresses of fall harvest. Widely adapted but because of its earliness relative to other storage cabbages, we recommend planting a bit later if **storage** is your intent. Tested negative for BR and BL. Resists FY. ⑤



A=0.5g, $2.80 **B**=1g, $4.80 **C**=4g, $14.00 **D**=14g, $40.00 **E**=28g, $75.00

Pests and Diseases for all Brassicas: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Asian Greens, Kale & Collards, Kohlrabi

Minimum germination soil temperature 40˚, optimal range 55–95˚.

Diseases: For further information see below.

BL Blackleg BR Black Rot BS Bacterial Speck
FY Fusarium Yellows TB Tipburn

Major pests: Cabbage Looper, Diamondback Moth, Imported Cabbageworm

Cultural controls: control cruciferous weeds near crop fields, till under crop debris of early season brassicas after harvest.

Materials: Spinosad (**8762**), Bt (**8753-6**).

Pest: Flea Beetle

Cultural controls: floating row covers (**8874**), mulch with straw, time plantings for fall harvested crops only, crop rotation, perimeter trap cropping.

Materials: AzaMax (**8735**), Spinosad (**8762**), Pyganic (**8765**).

Pest: Cabbage Root Maggot

Cultural controls: time planting to avoid first hatching, use row covers, control weeds.

Major diseases: Black Rot, Alternaria Leaf Spot, Blackleg, Club Root, Downy Milldew, White Mold

Cultural controls: avoid transplanting plants with yellow leaves or v-shaped lesions, crop rotation, destroy crop debris after harvest, avoid overhead irrigation, control weeds, allow for good air movement.

Materials: Actinovate (**8702**), copper compounds (**8672**) may help for these diseases.

Disease: Head Rot

Cultural controls: use well-domed varieties, harvest heads when tight, cut stalks at an angle.

Material: copper

more GREEN CABBAGE

3390TB Tribute (103 days) F-1 hybrid. This spectacular autumn cabbage made gigundo solid round 10–12 lb blue-green heads reaching 10" across that figuratively jumped out at me even though I wasn't planning to add another cabbage. 100% were marketable. Earlier and larger than **3394** Bartolo with huge wrapper leaves that provide perfect ground cover to stifle weeds. Not a great keeper, softening and splitting by Dec, so enjoy it in fall when it is sweet and crunchy raw with a mild tang and a cabbage taste in its ribs. Good flavor for such a big cabbage, makes great sauerkraut. Remained sweet with a subtle brassica flavor when cooked, a close second to **3352** Golden Acre in our test. Fully ripe around Oct. 1 from a July 10 transplanting. Give this champ some space as well as Tribute. Tested negative for BR and BL. ③

A=0.5g, $1.90 **B**=1g, $3.00 **C**=4g, $6.00 **D**=14g, $12.00 **E**=28g, $22.00

3392GM Gunma (110 days) F-1 hybrid. Named for a prefecture on Honshu Island in Japan known for its cabbage production. Our choice for a superior flat-topped green cabbage ideal for cooks and gourmets, good for kraut and kimchi. Its good moisture content makes sufficient brine so that you don't need to add more to the kraut. Its large heads (avg 5–7 lb but can get up to 11–13 lb) grow nearly 1' across, yet remain almost coreless. Although ready on Aug. 2 from a May 21 transplanting, these cabbages sat in the field for two months without splitting. Sweet tender wrapper leaves suitable for using raw for cabbage wraps and rolls. Outer leaves can't hold up once nighttime temperatures plummet to the 20s, so not for storage. Tested negative for BR and BL. Resists FY, TB ④

A=0.2g, $2.60 **B**=0.4g, $4.60 **C**=1g, $7.50 **D**=4g, $25.00 **E**=28g, $160.00

3394BT Bartolo (115 days) F-1 hybrid. Consider Bartolo if you need an excellent hybrid **storage** cabbage that will last until May. Sits high off the ground with large hard round 4–8 lb dark green heads, well protected with waxy thick serrated wrapper leaves. Very high-yielding and a beautiful plant in our trials, 90% marketable heads. Robust peppery flavor. Tested negative for BR and BL. Tolerates BS and TB. ④

A=0.5g, $4.00 **B**=1g, $7.00 **C**=4g, $24.00 **D**=14g, $76.00 **E**=28g, $145.00

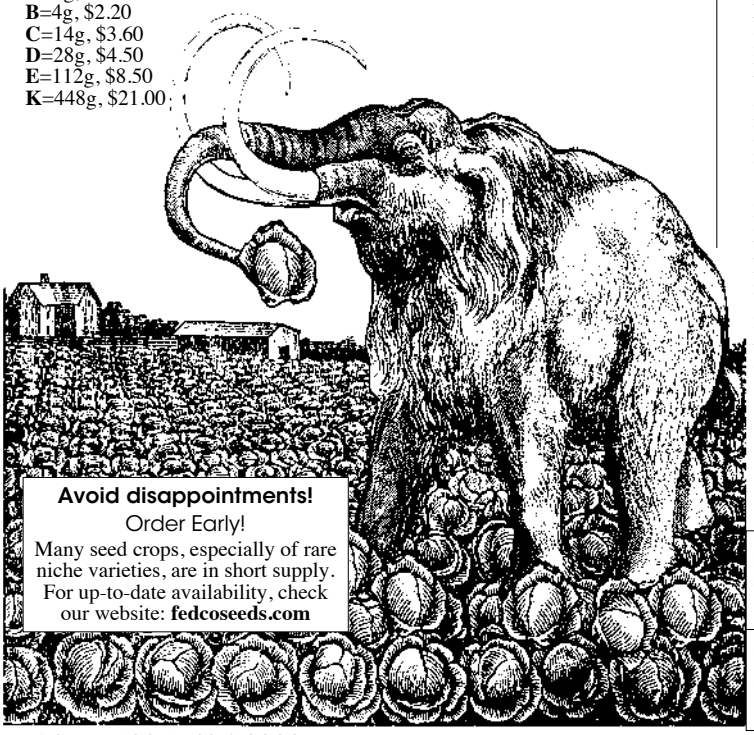
RED CABBAGE

3375RP Ruby Perfection (85 days) F-1 hybrid. This fancy midseason type has produced some of the loveliest cabbage we've ever seen: solid deep purple-red spherical heads averaging 4–6 lb, occasionally reaching 8 lb. "Hard as a rock," observed Jason Kafka. A **great storage** cabbage; will keep till May in the root cellar. Survived outdoor temperatures of 18° double-covered under Agribon 19. Low tolerance to BR, but tested negative for BR and BL. ⑤

A=0.5g, $4.00 **B**=1g, $6.00 **C**=4g, $18.00 **D**=14g, $58.00 **E**=28g, $105.00

3389RR Mammoth Red Rock (100 days) Open-pollinated. A large late cabbage with firm flattened round 5–8 lb heads, 8–10" across and red-purple to the core. Rated as a **good keeper** in storage with a crisp sweet taste. This favorite goes back to 1889. Vaughan in 1904 called it "the surest heading red cabbage ever introduced." R.B. Dunning & Co. of Bangor, ME, sold a packet for a nickel and an ounce for 35¢ in 1936. ②

A=2g, $1.40
B=4g, $2.20
C=14g, $3.60
D=28g, $4.50
E=112g, $8.50
K=448g, $21.00



Avoid disappointments!
Order Early!
Many seed crops, especially of rare niche varieties, are in short supply. For up-to-date availability, check our website: **fedcoseeds.com**

The snowflake symbol ❄ indicates that a variety is hardy through at least part of our Maine winter. See page 5 for full symbol key.

SAVOY CABBAGE

3378ML Melissa (85 days) F-1 hybrid. A gorgeous savoy, with 2–4 lb solid slightly flattened light green heads surrounded by attractive dark blue-green waxy wrapper leaves. Can grow twice that size given high fertility and wide spacing. A vigorous grower even in cold wet conditions, Melissa ripens around Sept. 1 from early June transplanting. Flavor improves with cold weather. Adapted to close spacing. For dependability, uniformity, attractiveness and taste, Melissa can't be topped. Tested negative for BR and BL. FY, TB tolerant. ④

A=0.5g, $4.00 **B**=1g, $6.00 **C**=4g, $22.00 **D**=14g, $65.00 **E**=28g, $125.00

3380FG Frigga (86 days) Open-pollinated. Usually grows compact 3 lb round 6" balls, though under wide spacing and high fertility can achieve double that size. As handsome a plant as I ever hope to see with highly savoyed dark green wrapper leaves curling tightly around the core. Real cabbage flavor with some sweetness, texture on the dry side. Holds in the field for a month after maturity. For savoy connoisseurs. ③

A=2g, $2.10 **B**=4g, $3.60 **C**=14g, $7.00 **D**=28g, $10.00 **E**=112g, $28.00 **K**=448g, $90.00

3384DV Des Vertus (95 days) Open-pollinated. From the 1800s, also known as Large Drumhead Savoy. French variety features medium-green large heads averaging 4–6 lb. Mild, juicy and semi-sweet. **Moderate storage**. Cold-tolerant into fall; may overwinter in warmer climes. ②

A=2g, $1.80 **B**=4g, $3.40 **C**=14g, $6.00 **D**=28g, $10.00 **E**=112g, $30.00 **K**=448g, $105.00

3391DD Deadon (105 days) F-1 hybrid. While its lovely savoyed pinkish-purple outer leaves dusted with grey are often used for garnish, its light green interior core is great for salads and cole slaw. The outer color intensifies as temperatures cool in the fall. Sets solid medium-large 3–6 lb heads of 6–10" diameter with densely packed innermost leaves that are very sweet with a spicy nip. Dead certain to be a flavorful cool-weather treat. Developed as an **over-wintering** cabbage, and it over-wintered in Donna Dyrek's trials, so it can nourish you in spring as well as late fall. Tested negative for BR and BL. Resists FY. ❄ ④

A=0.1g, $2.70 **B**=0.3g, $5.00 **C**=1.2g, $15.00 **D**=6g, $60.00

3397WR Wirosa (125 days) F-1 hybrid. A savoy cabbage that is ideal for late autumn and capable of wintering over with protection. The solid uniform 8" glossy blue-green heads are closely wrapped with crinkly leaves. From an Aug. 18 start and mid-September transplanting, 4 of 6 survived a mild Maine winter with no protection except snow cover. They continued growing all the next summer, not finishing until mid-September, so as a winter cabbage they need more than a year. With an early spring start they'll be ready the same fall. Good yields and quality for fresh market and **storage**. Tested negative for BR and BL. ❄ ④

A=0.1g, $2.00 **B**=0.3g, $3.80 **C**=1.2g, $11.00 **D**=6g, $42.00

Chinese Cabbage: pg 32, in Asian Greens

I love your catalog. The pictures and descriptions are amazing. I do wish that you would keep all political references out of such an amazing catalog. They DO NOT belong in a seed catalog!!!!
– Linda Arthur, Horse Shoe, NC

I love your Catalog—I am far-right politically—but I still like the political stuff in your catalog. I totally disagree with the person who wrote in that they want it out of the catalog.
– Daniel Carr, Hodgenville, KY

Carrots

— DAUCUS CAROTA —

1/8 oz packet sows 35 ft; 1 oz, 280 ft. 1 gram packet has more than 600 seeds and sows about 10 ft.

Carrots average 18,000 seeds/oz with significant variations among varieties.

Culture: Very hardy. Early carrots can be sown by late April. Can take up to 3 weeks to germinate; keep rows from drying out for faster emergence. Sow carrots for winter storage in mid-late June. Thinning is critical: At 3" high thin, to 1/2" apart, at 6" thin again to 1-2" apart. Minimal germination temperature 40˚, optimal range 60–85˚.

Diseases:

ALTS Alternaria Leaf Spot
CLS Cercospora Leaf Spot
P Pythium

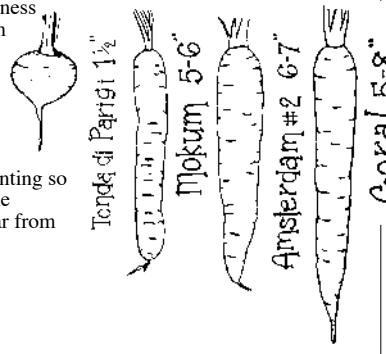
ALTS shows up first on the oldest foliage as brown-black spots edged with yellow. Foliage blackens and shrivels as it develops and spreads. Maintaining a good crop rotation is the best preventive.

Days to maturity are from date of seeding.

Pelleted carrot seed: We are pleased to offer pelleted carrot seed in three varieties. Pellets can save time-consuming thinning for both home gardeners and commercial operations. They can be sown by hand or with precision seeders. Our carrot pellets are size 11.5. Pellets have one major drawback: the process shortens the viable life of the seed. Buy only as much pelleted seed as you need for this season. It will not hold over well. Our pellets use an inert clay coating that is in compliance with NOP standards. Keep pellets cool and dry prior to planting and maintain steady soil moisture during the germination period.

EARLY CARROTS

Mokum (48 days) F-1 hybrid. Arguably the tastiest carrot for fresh eating in late spring and summer. Repeat winner of our summer taste tests. Mokum's earliness, slenderness and sweetness transcend its flaws. Blunt Amsterdam type that sizes extremely quickly with short weak tops, brittle and not machinable. Should be harvested at 5–6" before the roots push out of the ground and develop green shoulders. Although not a versatile full-season carrot, Mokum merits succession planting so you can enjoy it young throughout the summer. Always the first to disappear from our spring patch. Not for storage. ④



2086MK Mokum Unpelleted ④
A=1g, $2.70 **B**=3g, $6.00
C=6g, $8.50 **D**=24g, $27.00
E=120g, $120.00

2087MP Mokum Pelleted ④
A=100 pellets, $2.30 **B**=250 pellets, $3.20 **C**=1,000 pellets, $5.50
D=5,000 pellets, $13.00 **E**=10,000 pellets, $22.00
K=25,000 pellets, $46.00

2018TP Tonda di Parigi (55 days) Open-pollinated. Round Parisian-type carrot. At 1 1/2" Tonda is small with deep orange color and good taste. Best harvested when they are young and tender and very sweet. Enjoy them cooked to maximize their sweetness and to elicit their superb creamy texture. The easiest carrot to grow if you have heavy clay soil. 19th-century heirloom from Paris. Not for storage. ②
A=1/8oz, $2.30 **B**=1/4oz, $4.30 **C**=1/2oz, $8.00 **D**=1oz, $14.00
E=4oz, $26.00

2024AM Amsterdam #2 (55 days) Open-pollinated. Slender tapered 6–7" roots. Ideal for succession plantings of baby carrots throughout the summer, provided they are given adequate moisture. Not particularly sweet but with a carroty sharpness that leaves a pleasant taste sensation. Crisp and tender with a small core. Not for storage. ②
A=1/8oz, $1.80 **B**=1/2oz, $5.00 **C**=1oz, $8.00 **D**=4oz, $22.00
E=1lb, $80.00

2028CL Coral (55 days) Open-pollinated. Heron happened upon this hard-to-find Euro specialty carrot in a Spanish seed catalog, where it was mysteriously the only carrot variety offered. We found out why when we sent some trials in 2014 to Detroit's Lafayette Greens where it swept the hybrid and OP competition. Entirely coreless, of distinctive translucent pinkish-orange, Coral won again in our 2016 trial of potential Nelson replacements. Best picked promptly for tender finger-sized Early Nantes–type roots that taper to a semi-blunt tip. The mild sweetness is boosted by a notable aroma, described as "carrot perfume" by staff tasters. With the most upright tall tops of our summer carrot trial, Coral delivers a continental flair to your first picked bunches. ④
A=1/8oz, $1.90 **B**=1/2oz, $6.00 **C**=1oz, $8.00 **D**=4oz, $18.00
E=1lb, $55.00

MAIN SEASON

Napoli OG (55 days) F-1 hybrid. A favored variety for Eliot Coleman's famous candy carrots overwintered in unheated greenhouses. Blunt Nantes type grows 7–8" cylindrical roots with strong medium-sized dark green tops. Crispy, snappy, sweet and juicy with a medium core. "Extra crunchy," rated one of our tasters. Also grows rapidly when sown outdoors in spring and makes a good early bunching carrot. Suitable for fresh market or storage. Good performer in high tunnels. ④

2090NO Napoli Unpelleted OG ④
A=1g, $2.90 **B**=3g, $7.50
C=6g, $13.00 **D**=24g, $42.00
E=120g, $185.00

2091PO Napoli Pelleted OG ④
A=100 pellets, $2.80
B=250 pellets, $4.30
C=1,000 pellets, $7.50
D=5,000 pellets, $16.00
E=10,000 pellets, $28.00
K=25,000 pellets, $62.00

Yaya OG (58 days) F-1 hybrid. Nantes type. Tom Vigue says "unbeatable as a summer carrot." Not yet a grandmother in the carrot world, relatively new Yaya is in the same quality class with Mokum and Nelson, a standout three straight years in our observation plots. In his stale-bed method carrot intensification project in Monroe, ME, grower Mark Fulford achieved a yield of 254 lb from a 150 sq ft 4-row carrot bed using Yaya, more than 80% #1s. That averages out to 73,000 lb/acre, more than double the average carrot yield according to the USDA. Averaging 6", Yaya is slightly shorter-rooted than Nantes Fancy but more flavorful. Strong tops, good for bunching. Crisp clean sweet carrot flavor. Can be used for baby or full-sized carrots. ④

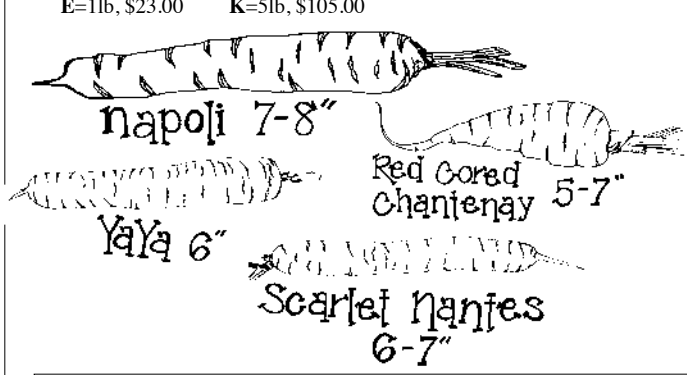
2092YO Yaya Unpelleted OG ④
A=1g, $2.70 **B**=3g, $7.00 **C**=6g, $11.00 **D**=24g, $32.00
E=120g, $140.00

2093AO Yaya Pelleted OG ④
A=100 pellets, $2.80 **B**=250 pellets, $4.30 **C**=1,000 pellets, $7.50
D=5,000 pellets, $16.00 **E**=10,000 pellets, $28.00
K=25,000 pellets, $62.00

2042SN Scarlet Nantes (68 days) Open-pollinated. This old-time favorite Nantes variety with bright orange roots averaging 6–7" proves that good quality is not always expensive. Sweet with a small dark core. Very good for storage, too. Received a high overall score in the 2005 Oregon State University trials. Has been our best-selling carrot in recent years. ②
A=1/8oz, $1.50 **B**=1/2oz, $3.50 **C**=1oz, $5.00 **D**=4oz, $9.00
E=1lb, $23.00 **K**=5lb, $105.00

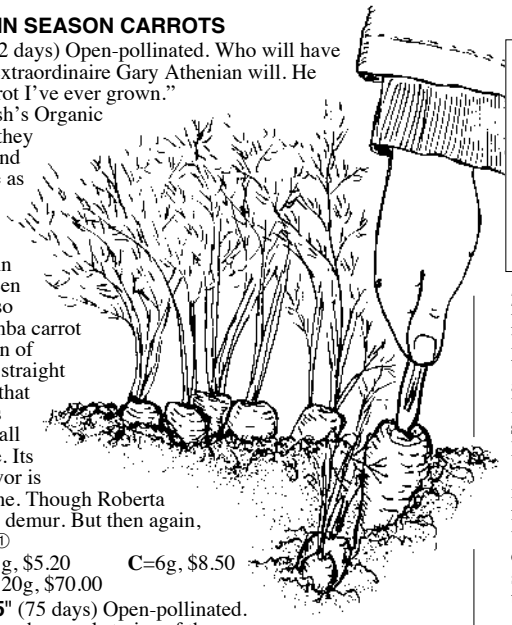
2051FO Nantes Fancy OG (68 days) Open-pollinated. It's been a long row to hoe getting this longtime customer favorite back into our catalog. And although other strains claim the name, they fall short, not deserving the fame of this classy Nantes type. Fancy grows uniform cylindrical 7" roots with unusually good interior color, crisp texture and fine flavor. Holds well and is an excellent keeper, too. Outstanding quality for an OP carrot. A 50 lb bag of seed, assuming an average germination of 80%, has the potential to produce more than eleven million carrots! ① **BACK!**
A=1g, $2.00 **B**=3g, $4.50 **C**=6g, $8.00 **D**=24g, $24.00
E=120g, $75.00

2058RC Red Cored Chantenay (70 days) Open-pollinated. According to William Woys Weaver, this heirloom originated in France around 1879 and "needs no improvement." Produces 5–7" thick red-orange roots that have had excellent carroty flavor in our September taste tests. Dependable performer does well in heavy soils. The storage carrot of choice for Jay and Polly Armour of Four Winds Farm in Gardiner, NY. Devoted customers at their monthly winter markets esteem its taste. ②
A=1/8oz, $1.50 **B**=1/2oz, $3.50 **C**=1oz, $5.00 **D**=4oz, $9.00
E=1lb, $23.00 **K**=5lb, $105.00



Optimal Germination: Sowing seeds at sub-optimal temperatures is the most common cause of failure. We suggest consulting *Knott's Handbook for Vegetable Growers* and *The New Seed-Starters Handbook* by Nancy Bubel for optimal germination temperatures.

more MAIN SEASON CARROTS



2060RO Rumba OG (72 days) Open-pollinated. Who will have this dance? Line-stocker extraordinaire Gary Athenian will. He calls Rumba "the best carrot I've ever grown." When he brought it to Nash's Organic Produce in Sequim, WA, they admired its crisp texture and adopted it as their favorite as well, no small distinction as they breed carrots, their most important crop. Last offered by Johnny's in 2005, Rumba has since been hard to find. "Thank you so much for keeping the Rumba carrot alive!" writes Hilary Green of McKenzie Bridge, OR. A straight tapered 6–7" Nantes type that matures slowly and resists oversizing, it is great for fall harvest and winter storage. Its aromatic strong carrot flavor is admittedly not for everyone. Though Roberta also likes it, Gene and CR demur. But then again, not everyone can rumba. ①

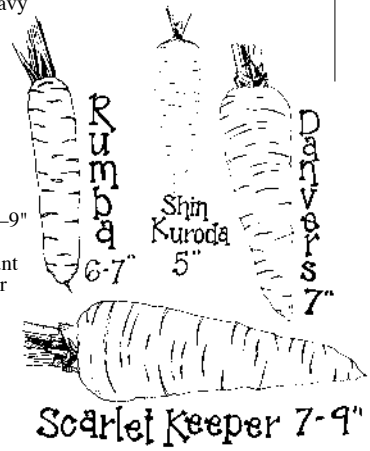
A=1g, $2.40 **B**=3g, $5.20 **C**=6g, $8.50 **D**=24g, $16.00 **E**=120g, $70.00

2073SK Shin Kuroda 5" (75 days) Open-pollinated. Over the years we've enjoyed several strains of the stump-rooted Japanese-type carrots that are so popular in Asian markets. *Shin* means 'new' in Japanese. Tender sweet Shin Kuroda scored high in our October taste test, and also impressed us with its bright orange color. These Kurodas, developed from the old Chantenay type, do well in a wide range of soil and weather conditions and store well. ②

A=1/8oz, $1.60 **B**=1/2oz, $3.60 **C**=1oz, $5.50 **D**=4oz, $10.00 **E**=1lb, $25.00 **K**=5lb, $120.00

2076DO Danvers OG (75 days) Open-pollinated. The original Danvers Half-Long was developed by market gardeners in Massachusetts in 1871. This modern improvement features 7" conical orange roots that taper to a point. Easier to grow in heavy soils than the longer more refined types. Broader at the top and more fibrous than the Nantes varieties. Outstanding for cooking and winter storage. ③

A=1/8oz, $1.70 **B**=1/2oz, $5.00 **C**=1oz, $9.00 **D**=4oz, $18.00 **E**=1lb, $50.00 **K**=5lb, $240.00



2079KO Scarlet Keeper OG (85 days) Open-pollinated. A stalwart storage carrot whose flavor improves with time. These 7–9" heavy cylindrical roots with broad red shoulders, large deep orange cores and blunt tips store well into early summer. Good for fresh eating and juicing, too. Wash fewer roots and drink sweet carroty juice with a flavor profile similar to our warehouse favorite, **2086** (pg 15) Mokum. ①

A=1g, $2.20 **B**=3g, $5.00 **C**=6g, $8.00 **D**=24g, $20.00 **E**=120g, $50.00

Basic Definitions

Open-pollinated varieties produce seed true to type if they are allowed to cross-pollinate only with other plants of the same variety. If they cross with *other varieties* of the same species, their seed will not be true.

Hybrid varieties are those produced from the crossing of two different inbred lines. *Seed saved from hybrid varieties will not breed true in the next generation.*

Amongst **open-pollinated** plants, **self-pollinated** (selfers) usually reproduce by using their own pollen. **Crossers** usually reproduce through the transfer of pollen from one plant to a different plant of the same species.

Botanical nomenclature goes from the general to the specific. Plants are classified into kinds by **genus**, **species** and **variety**. In *Cucurbita pepo* Sweet Dumpling, *Cucurbita* is the genus, *pepo* is the species and Sweet Dumpling is the variety.

Fedco Supports MOFGA

We did it! With your generous help, in 2018 we completed our five-year pledge to donate at least $50,000 to MOFGA (the Maine Organic Farmers and Gardeners Association).

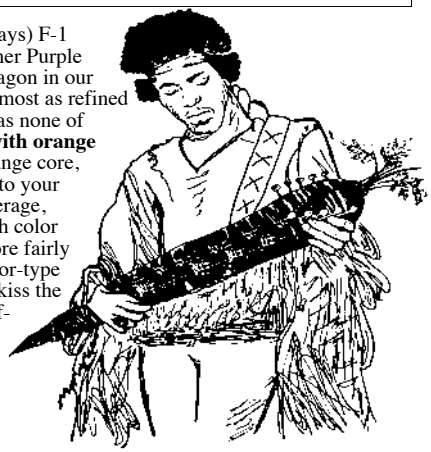
From 2014 through 2018 we donated $55,262 to MOFGA to support their work in advocating for sustainable and organic agriculture.

We continue to maintain close connections to MOFGA, and still encourage you to donate to MOFGA with your Seed or OGS order, either online or on the order forms, pages 109 and 113.

UNORTHODOX COLORS

2099OR Over the Rainbow Mix (48-75 days) If there's a better carrot mix than this one, it must be somewhere over the rainbow, way up high. We took a good formula called Rainbow Mix, especially strong in the lighter shades of yellow and orange, and boosted it with our own choice of dark orange, purple and red varieties. In doing so, we sacrificed some of the uniformity our European supplier maintains, so not all the roots are perfectly slender and tapered, nor will they all mature at the same time. But oh the colors! ④

A=1g, $2.80 **B**=3g, $7.50 **C**=6g, $12.00 **D**=24g, $40.00 **E**=120g, $180.00



2096PH Purple Haze (70 days) F-1 hybrid. Again 2006 AAS winner Purple Haze outperformed Purple Dragon in our trial. Enhanced by a texture almost as refined as the best orange carrots, it has none of Dragon's harshness. **Purple with orange stretch marks** and a vivid orange core, Haze will really draw crowds to your stand. Its raw flavor, rated average, improves with cooking, though color fades. The 7" tapered roots store fairly well. This first purple Imperator-type carrot may make you want to kiss the sky! Contains 0.5% orange off-types. ④

A=1g, $3.20
B=3g, $8.00
C=6g, $12.00
D=24g, $38.00
E=120g, $170.00

2097WS White Satin (70 days) F-1 hybrid. Satin, a Nantes-Imperator cross, is by far the best white carrot we've trialed. Hillary Nelson of Canterbury, NH, says its classic 8" roots are "some of the most perfect looking carrots I've grown—straight and long," with the ideal carrot shape in a pleasing creamy **white**. Sweet and crunchy when eaten raw, it has none of the wild carrot taste or hairiness typical of other white carrots. When cooked it is sweet and mild with a smooth texture. Develops 1" green shoulders when mature. Medium core. Contains 2% orange off-types. ④

A=1g, $3.20 **B**=3g, $8.00 **C**=6g, $12.00 **D**=24g, $38.00 **E**=120g, $170.00

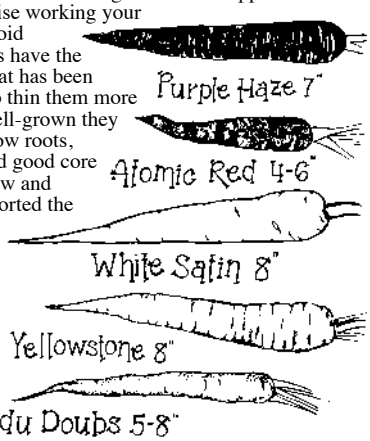
2063YS Yellowstone (72 days) Open-pollinated. Yellowstone boasts a crisp clean flavor that has shown up well in our recent taste tests. Big-shouldered **light yellow** roots with large greenish-yellow cores grow up to 8" long, averaging 7". Productive in a wide variety of soils. Research shows that yellow carrots contain xanthophylls, pigments similar to beta carotene, that help develop healthy eyes and may help prevent lung and other cancers. ④

A=1g, $2.50 **B**=3g, $5.50 **C**=6g, $9.00 **D**=24g, $22.00 **E**=120g, $90.00

2068AO Atomic Red OG (74 days) Open-pollinated. This imperator type is really **red with a hint of purple** on the outside of the 4–6" cylindrical roots. Slice it open to rings of color, the red rind giving way to a deep orange interior with a lighter core. Even the stems and tops show red. Roots taste mild and sweet when raw. Keeps its color when cooked and develops a yummy carroty sweetness with no harshness. Taste is pure bonus. Color packs the wallop that could make your sales explode. Susceptible to P and to cavity spot. ③

A=1g, $2.30 **B**=3g, $5.20 **C**=6g, $8.50 **D**=24g, $19.00 **E**=120g, $80.00

2078JD Jaune du Doubs (78 days) Open-pollinated. I like this 19th-century French heirloom best of all the **yellow** carrots. Holli Cederholm, another admirer, called it "a mainstay in [her] open-pollinated rainbow carrot bunches," and reported it performed beautifully on her heavy and rocky new ground—with fewer culls than **2076** Danvers. Not everyone agrees. Some are put off by its sometimes rough unrefined appearance and variable taste and texture. We advise working your seed bed well before sowing to avoid forked or shallow roots. The plants have the kind of dense rampant wildness that has been tamed out of the newer hybrids, so thin them more rigorously than other varieties. Well-grown they produce smooth conical 5–8" yellow roots, showing slight green shoulders and good core color. Better flavor cooked than raw and retains good color. Cederholm reported the roots stayed crisp and crunchy in storage for tri-colored carrot slaw all winter. ②



A=1/8oz, $1.90 **B**=1/2oz, $6.00 **C**=1oz, $8.00 **D**=4oz, $26.00 **E**=1lb, $100.00

Cauliflower

Brassica oleracea (botrytis group) **~100-400 seeds/g.**

Culture: Start like broccoli but needs more TLC. Do not allow to get pot-bound; avoid interruptions in growth. Cauliflower heads will "button" under stress. Most varieties can't stand the heat and are not suitable for summer production. When heads first appear, bend leaves over curd to prevent discoloring. Minimum germination temp 40˚, optimal range 55–80˚.

Days to maturity are from direct seed. Subtract 20 days for transplants.

3402FI Fioretto 60, flowering stick type (60 days) F-1 hybrid. This great cauliflower is determined by both a luxury of fine-textured curd and a tender nutty stem. Developed from lesser-known tropical and Italian lines of annual summer cauliflower, Fioretto's breathtaking coral-like beauty and unusual stick-type form was an unexpected surprise in our 2016 trials. The Fioretto class produces a large slightly flattened 8–14" head with creamy curds atop a somewhat loose bouquet of longer stems. As the head begins to expand into slightly spaced irregularity, each floret gently extends into a single-serve branch that should be harvested individually. In Japan, where this variety originated, it's enjoyed as a pickled delicacy with unique beauty. When cooked, the tasty stems brighten into a lime green to offset the sweet button-like florets of curds. Perfect for cutting-edge chefs, markets, and your own salads, pickles and sautées. Plant once temperatures have warmed to help the plants develop enough that they do not head too early. ⑤

A=0.1g, $3.00 **B**=0.2g, $5.00 **C**=1g, $20.00 **D**=2g, $32.00 **E**=4g, $60.00

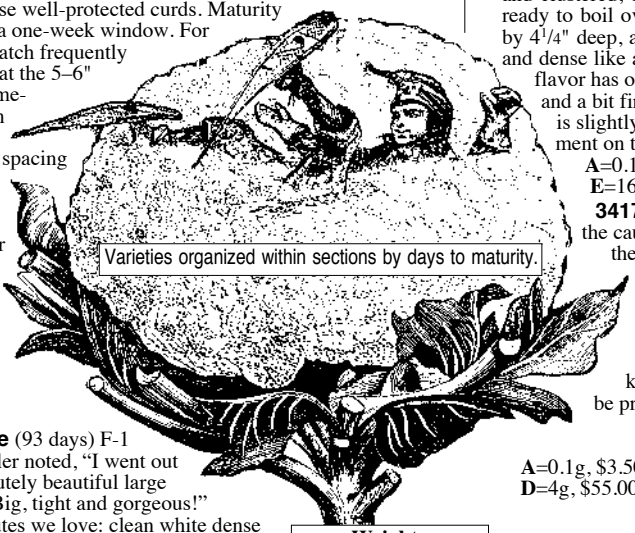
3404CS Charming Snow (60 days) F-1 hybrid. Our first early cauliflower. Its short white stems bear compact 1–2 lb uniform round firm white tight heads with fine beads. Though seeded as late as July 8, these were already heading for Donna Dyrek by the first of September. *Note: Heads not as dense or substantial as the maincrop varieties.* ③

A=0.5g, $1.90 **B**=1g, $3.00 **C**=4g, $7.00 **D**=14g, $14.00 **E**=28g, $25.00

3410SC Snow Crown (70 days) F-1 hybrid. Nothing comes close to Snow Crown for the second-early slot. Makes cauliflower a cinch to grow. Dependable producer of uniform 6–7" heads early summer through October. Drought resistant. Sometimes develops pink heads in adverse conditions. 1975 All-America winner from Takii. Tested negative for BR and BL. ⑤

A=0.5g, $4.00 **B**=1g, $6.00 **C**=4g, $20.00 **D**=14g, $64.00 **E**=28g, $110.00

3425SB Snowbowl (83 days) F-1 hybrid. Not another college football bowl game, instead a pun on the old OP Snowball varieties, a huge improvement over all of them and likely national champion in the early-midseason class. Rated the best-flavored cauliflower in our trials, "a real wowser" says Nikos. Delicate, chewable, tender, buttery, fine-textured and creamy cooked, report our tasters. Wrapper leaves extend upward, not out, contributing to the extra white color of these well-protected curds. Maturity is very uniform, all within a one-week window. For best quality, inspect your patch frequently and be prepared to harvest at the 5–6" stage when these dense dome-shaped 1 1/2 lb heads remain very tight. Compact plant habit permits close 20–24" spacing for high yields and quick successions, a big plus for market growers. 22" tall. Have not tested for summer harvest but may be worth a small trial. Tested negative for BR and BL. ⑤



Varieties organized within sections by days to maturity.

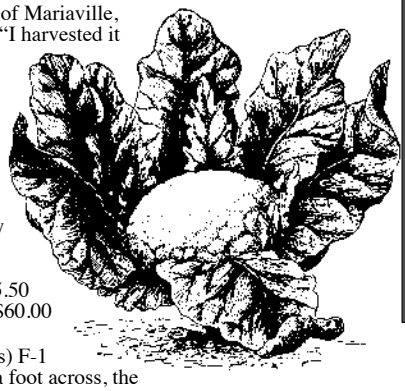
A=0.5g, $2.90
B=1g, $4.80
C=4g, $16.00
D=14g, $48.00
E=28g, $90.00

3428SM Snow Mystique (93 days) F-1 hybrid. On Oct. 11 our trialer noted, "I went out today and found two absolutely beautiful large heads of Snow Mystique. Big, tight and gorgeous!" Mystique has all the attributes we love: clean white dense well-proportioned heads, the same good upright habit and the dome shape to ward off excess moisture plus a tender flavor not expected from such a massive plant. Massive it was, heads rated at 1.8 lb average by our supplier, but double that weight in our trial. Perfect for end of September and early October when cauliflower is at its best in our climate. Can be slow-growing in higher elevations and cold spots. Tested negative for BR and BL. ⑤

A=0.5g, $3.00 **B**=1g, $4.80 **C**=4g, $16.00 **D**=14g, $45.00 **E**=28g, $84.00

Weight equivalents	
1 gram =	.035 oz
3 grams =	.106 oz
6 grams =	.212 oz
24 grams =	.851 oz
120 grams =	4.24 oz
1/16 oz =	1.77 g
1/8 oz =	3.55 g
1/4 oz =	7.09 g
1/2 oz =	14.2 g
1 oz =	28.4 g

3438CC Candid Charm (95 days) F-1 hybrid. We have in the past bragged about the awesome 6–9 lb heads Candid Charm sometimes produces. Now Barbara Weiss of Mariaville, ME, joins us in these plaudits. "I harvested it by the wheelbarrow load literally. Absolutely huge delicious heads," she says. Remarkably consistent in maturing marketable 4–5 lb snow-white curds within a 3–4 day window even in marginal years. Adapted to fall production only, when it's easy to grow and less fussy. Tested negative for BR and BL. ⑤



A=0.5g, $3.10 **B**=1g, $5.50 **C**=4g, $19.00 **D**=14g, $60.00 **E**=28g, $110.00

3440SY Symphony (96 days) F-1 hybrid. Immense heads, up to a foot across, the classiest as well as the largest cauliflowers trialer Donna Dyrek ever grew, as tight as they were enormous, with no hollow stems. She raved about their sweetness and lack of brassica bite. Dyrek started the seeds on May 30, transplanted them on July 8 and harvested Symphony the 2nd week of October 2007. Requiring a long season, Symphony is for fall harvest only. Tested negative for BR and BL. ⑥

A=0.2g, $2.50 **B**=0.4g, $4.00 **C**=1g, $6.00 **D**=4g, $21.00 **E**=28g, $98.00

COLORFUL CAULIFLOWER

3412FS Flame Star (68 days) The first discovery of an orange cauliflower was in 1970 in a field of white cauliflower near Toronto. This carotene-rich mutant was smaller and less flavorful than ideal, so work began to cross-breed it to white cauliflower in order to increase size and flavor, while keeping the unique color. Michael Dickson did this cross breeding and selection for decades at the Experimental Station in Geneva, NY. One of the early releases was Cheddar, a variety carried by Monsanto, so one we would not sell despite its obvious appeal. But now we have discovered Flame Star, whose **pastel orange** color is not only attractive but also makes it many times richer in vitamin A than its paler cousins. With 7" uniform heads of smooth dense curds on a sturdy plant, this is a highly adaptable variety that consistently performs well in a range of conditions, especially heat stress, and so a good choice for specialty markets. But the flavor! I'm a stickler for good taste in raw cauliflower and Flame Star gets high marks for a rich sweet flavor whether raw or cooked. At our warehouse trial table, at the end of the day we tasted cauliflower, Flame Star had disappeared. And that's the ultimate approval rating. Tested negative for BR and BL. ⑥ **NEW!**

A=10 seeds, $2.20 **B**=40 seeds, $7.00 **C**=100 seeds, $13.00 **D**=500 seeds, $50.00 **E**=1,000 seeds, $90.00

3413VV Vitaverde (76 days) F-1 hybrid. With compact, somewhat raised and clustered, bold **bright green** curd, Vitaverde cauliflower looks almost ready to boil over into romanesco form. The 1.8 lb heads measure 6" wide by 4 1/4" deep, adding heft to eye-catching color. Raw, Vitaverde is crunchy and dense like a romanesco, not grainy or ricey. The sweet mild cauliflower flavor has only a hint of sharpness. Steamed, the texture becomes smooth and a bit firm, and the flavor mild, savory and satisfying. Its lively green is slightly diminished to a warm rich shade, keeping accent and excitement on the plate and the palate. Tiny seeds, nearly 40 per packet. ④

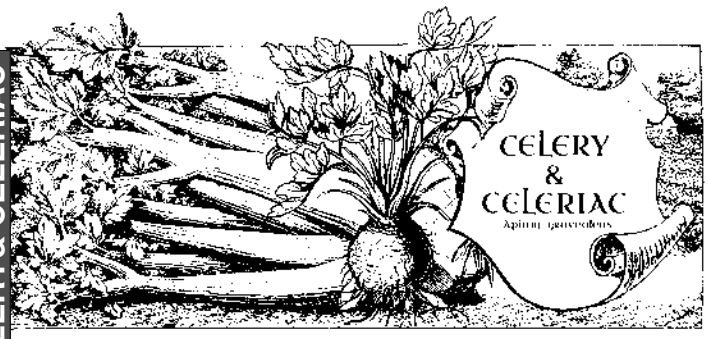
A=0.1g, $2.90 **B**=0.2g, $4.00 **C**=1g, $16.00 **D**=4g, $60.00 **E**=16g, $220.00

3417GR Graffiti (80 days) F-1 hybrid. As if aliens had landed in the cauliflower patch, the brilliant—almost psychedelic—**purple** of these good-sized heads is decidedly other-worldly and will draw customers to your market display. Vibrant Graffiti boasts a true cauliflower head on large plants with dark green leaves. Resists summer heat and performs even in drought, but very slow to head up in cool weather. Day-glo florets make delightful crudités, a delicious cooked vegetable or colorful kimchi. The color fades to bluish-purple when cooked, but can be preserved by adding a tablespoon of lemon juice to the cooking water. Very expensive seed; packets have roughly 15 seeds. Tested negative for BR and BL. ⑥

A=0.1g, $3.50 **B**=0.2g, $5.50 **C**=1g, $15.00 **D**=4g, $55.00 **E**=16g, $200.00 **K**=32g, $375.00

Romanesco broccoli on p. 12 (some consider it a green cauliflower)

Supplier Codes Know where your seed comes from! Details on page 5.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.



Apium graveolens **~2000-3000 seeds/g.**

Culture: Tender, must be started indoors in March, 10–12 weeks before setting out. Young seedlings grow slowly, requiring rich moist soil to survive. Regular rainfall or irrigation is necessary for good growth, flavor and yields. Celery withstands light fall frosts but gets kayoed by serious cold.

Minimum germination temperature 40˚, optimal range 59–70, needs fluctuating temperatures.

All open-pollinated.

Days to maturity are from date of transplanting, not seeding.

3616AF Afina Cutting Celery (60 days) Sturdy dark green foliage has rich aroma and taste, regenerates quickly after cutting. Imparts the same flavor to stews and soups as conventional celery. Although its culture is the same, it is much hardier and easier to grow. Both its thin hollow stems and its leaves can be used fresh or dried. Grows up to 30". ④

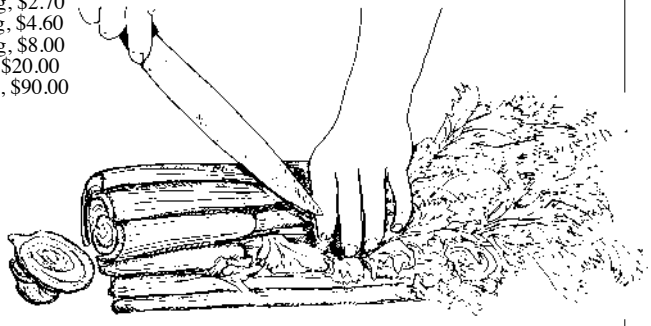
A=0.2g, $1.60 **B**=0.4g, $2.50 **C**=1g, $4.00 **D**=4g, $6.00 **E**=28g, $18.00

3621PO Par-Cel Cutting Celery OG (72 days) A curly cutting celery that looks like parsley but tastes more like celery. A fussy germinator outside, we recommend starting inside. Par-Cel withstands drought and heat, and is remarkably cold-tolerant. Cut leaves back once the roots are well-established. Older leaves develop very strong flavor. Excellent in Asian cuisine. ①

A=0.2g, $2.20 **B**=0.4g, $3.60 **C**=1g, $6.00 **D**=4g, $14.00 **E**=10g, $30.00

3624VO Ventura OG/BD (80 days) Ventura takes the difficulty out of growing celery. Glossy bright green plants 28–30" tall have 12" stalks and well-developed hearts. Widely adapted. "Vigorous growth, good taste, very little punkiness in the center," praises Nicholas Panjiris. Develops beautiful thick crisp stalks with rich never-harsh flavor even in less-than-ideal conditions. Easy to grow as long as young plants receive adequate moisture, a necessity for steady growth. Irrigate if necessary. Some tolerance to fusarium, but susceptible to boron deficiency. Certified biodynamic seed. ①

A=0.1g, $2.70
B=0.2g, $4.60
C=0.4g, $8.00
D=2g, $20.00
E=10g, $90.00



3630RO Redventure OG (84 days) Inspired cross of Giant Red Celery and Ventura by Frank Morton in the early 1990s, now a stabilized cultivar. This marriage of opposites brings out the best of both partners and hides the flaws. Wanting to offer red celery, we trialed heirloom Giant Red but found it tough, stringy and too strong for modern palates. However, when combined with Ventura, the harshness and textural flaws disappeared into a delicious chewy stem with plenty of interior red color. Not as tender as Ventura, but with an enhanced flavor that will really enliven soups, salads and casseroles. Ω ①

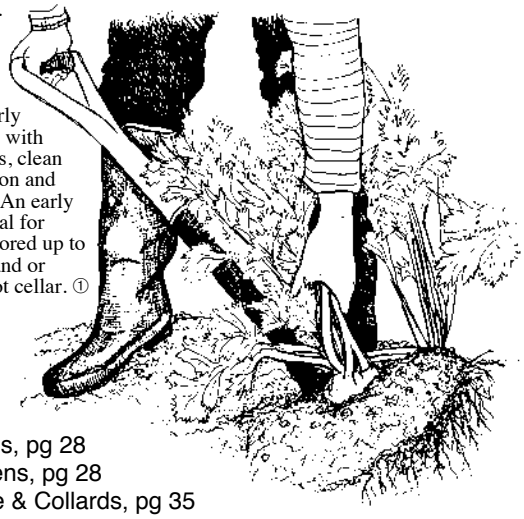
A=0.2g, $2.20 **B**=0.4g, $3.60 **C**=1g, $5.00 **D**=4g, $10.00 **E**=28g, $50.00

3634TO Tango OG (90 days) The dance originated in South America but the celery seed is from Bejo in Holland. Adam Tomash and June Zellers, who always grow astounding celery, selected Tango as the star of one trial. Impressed with the variety's compact architecture and absence of punky centers, they grew massive dense plants even in close spacing. They say Tango is almost as nice as Ventura with not quite as good disease resistance. Once you taste its smooth tender sweet nearly stringless stalks, you're going to want this dance. *Note: Under conditions of fast growth, high temperatures and moisture it may exhibit a harmless condition that mimics bacterial wilt.* ④

A=0.1g, $3.30 **B**=0.2g, $5.80 **C**=0.4g, $8.90 **D**=2g, $36.00

Ω indicates the work of an independent plant breeder.
See sidebar on page 36 FMI. Full symbol key on page 5.

3646BO Brilliant Celeriac OG (100 days) *A. g.* var. *rapaceum* Celeriac, the frog prince of root vegetables, suffers no reduction in yield in rainy years. Despite its ugly exterior, it is coming into its own in the States, where it has recently been embraced by top-notch chefs and gourmets. Even though it is not a celebrated part of Downeast cuisine, Jason Kafka has successfully wholesaled it to Whole Foods and through Crown of Maine Coop. A staple in central and eastern Europe, its nutty parsley-celery flavor improved by light fall frosts, enhances meat, fish and poultry. Great raw for winter slaws and salads, it may be boiled, mashed or braised. Brilliant is a classy early celeriac, high yielding with relatively smooth roots, clean white internal coloration and superb eating quality. An early start indoors is essential for good yields. Can be stored up to six months in moist sand or damp leaves in the root cellar. ①



A=0.2g, $2.60
B=0.4g, $4.60
C=1g, $9.00
D=4g, $26.00
E=12g, $60.00

Chard: see Greens, pg 28
Chicory: see Greens, pg 28
Collards: see Kale & Collards, pg 35

Gleanings from our Seed Growers (part 2)

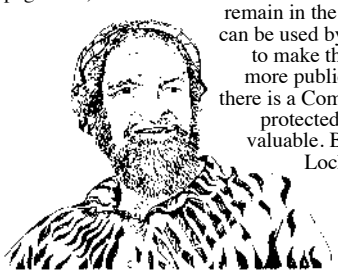
Jonathan Spero, of Lupine Knoll Farm in Oregon, doesn't come from an agricultural background. He grew up in the city and learned how to grow fruits and vegetables at an intentional community in Virginia. From there he went out to Oregon and met that older generation of Seedheads, Alan Venet and Alan Kapuler among them. When he saw the simplicity of their places and the work they were doing—"working to create a no-kill vegan salad of lettuce and tomato with Kapuler using chromatography to chart the vegetables for attributes found in meat"—he saw a model of how to farm and grow in a "small-scale, naive agriculture." He saw how, in creating a newer vegetable, a small individual could make a real difference. Then he discovered Carol Deppe's *How to Breed Vegetable Varieties* and the ranks of breeders increased by one.

For Jonathan, breeding always came first, and then the seed. A decade ago he retired from his regular job and now he's "pretty busy for a retired guy." He works with a handful of crops, most notably corn, but also a kale he originally found in a Tim Peters mix, a lettuce from one of Frank Morton's random crosses, and a broccoli out of the Farmer's Co-op Genome Project.

"So much is noticing it in the garden," he said. "I got lucky with the corn. And this particular property is suited to corn, with isolation for 3 breeding lines. Plus it's easy for me to do the selections. I'm not the most coordinated and dissecting small flowers would be difficult, but it's physically easy for me to cross, or self, corn."

Jonathan told me: "Breeding is gardening gone berserk. I like to farm, select, observe, cross, and see the outcome. I mostly grow things and see if someone might want it. It's work that is challenging and fairly low-tech. Getting the sweet corn in—and dried—can be challenging. But mostly it's worthwhile, fun work—not boring. It takes observation and analysis through generations. Selecting an improved vegetable for organic conditions is a worthwhile endeavour." And then he releases them in the public domain as open source.

Jonathan is a board member of OSSI, the Open Source Seed Initiative (see page 107.) He releases all his new varieties through OSSI, which means they remain in the public domain, can't be patented, and can be used by others in their breeding. "The idea is to make the concept of 'belonging to the public' more public, more visible, so that people see that there is a Commons, that is valuable and that can be protected. Often what is low-cost is not seen as valuable. But access to seed genetics is valuable. Locking down genetics prevents access to as good a food as can be possible." "Public domain" doesn't fully evoke the possibility to the people and to posterity, so OSSI is making people aware of the issue while also making seed available. Jonathan believes that by growing seed people can contribute on a small scale while having a big impact.



His advice on getting started: "Try it small and learn that you can get good quality where you're at—and reasonably reliably." He says growing seed is a way to do good, to use one's time wisely and to give value to your life. "It's satisfying to see that next generation; the seeds are a little better and someone else can benefit."

CORN

Zea mays

~100-160 seeds/ounce.

Seeds per packet vary, open-pollinated selections average 100 seeds/oz, normal sugary varieties 140 seeds/oz and SE cultivars with shrunken seeds 150-160 seeds/oz. We do not offer supersweets as these are poorly adapted to cold soils without using seed treatments. All corns minimum 2 oz packet.

Culture: Untreated sweet corn seed will not germinate in cold wet soil. Be patient and wait till soil warms to at least 60˚ before sowing, or start seedlings indoors and transplant at 3–6" before taproots take off. Tender, will not survive frost. Heavy nitrogen requirements. Plant seeds 3" apart in rows 3' apart. Plant in blocks of at least 4 rows to ensure adequate pollination, essential for good tip fill. Thin to 1' apart. When corn is knee-high, sidedress with azomite (**8213-6**) or alfalfa meal (**8260**) to stimulate growth. If you lack sufficient space for enough plants for good pollination, try hand-pollinating by cutting off the tassels and shaking their pollen onto the silks. Sweet corn is ready 18–24 days after the first silks show, the exact time dependent on the weather in the interim. Press ears 2" from the tips to assess kernel fullness. Harvest when the kernels are plump, soft, tender and filled with a milky juice. Most sugary enhanced varieties have an optimal picking window of 5–7 days, but some open-pollinated selections hold only 1–2 days.

Minimum soil temperature 50˚, optimal temperature range 60–95˚.

Pests: See the sidebar on page 21. A high fence or a good dog may be the best critter deterrents.

Diseases:

MDMV	Maize Dwarf Mosaic Virus
NCLB	Northern Leaf Blight
R	Rust
SCLB	Southern Corn Leaf Blight
ST	Stewart's Wilt

Varieties within each corn section are organized by days to maturity.
Days to maturity are from direct-seeding; for transplants, subtract 20 days.

YELLOW SWEET CORN

506CF Cafe (68 days) **Synergistic F-1 hybrid.** For many of us, the first and most important stop of the day is our local coffee purveyor. Super early-bird Cafe is truly the first stop in the corn patch, and this ain't no bland swill, folks! In our 2016 corn trials, Cafe sold us on its stellar brew of (kernel) depth, nuanced texture and honest sweetness. Cafe's 14–16 bright pure yellow rows fill to the tip on a hefty 8" ear. While most growers don't expect much from early types, Cafe brings midseason size, flavor and quality right out of the gate, all combined with superb cold-soil performance. Great coffee is a life-giving reward for getting out of bed each morning, and excellent early corn keeps gardeners charging through those long summer days. ②

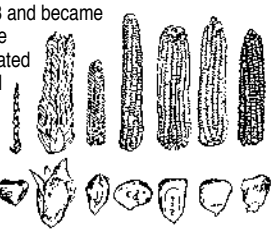
A=1oz, $3.00 **B**=8oz, $14.00 **C**=1lb, $25.00 **D**=5lb, $115.00 **E**=10lb, $220.00

516AO Ashworth OG (72 days) **Open-pollinated**. A composite of early varieties originally developed by the late Fred Ashworth of St. Lawrence Nurseries and marketed by Johnny's Selected Seeds starting in 1978. According to legend, Ashworth originally named his variety "Rat Selected" in honor of the rodents who broke into his seed storage room and alerted him to certain kernels that they preferred. Its short stalks have 6–7" yellow ears with good flavor. Be sure to harvest it at peak milk stage—like much open-pollinated corn it does not hold quality for long in the field. Germinates well in cool soil. ①

A=1oz, $2.50 **B**=8oz, $12.00 **C**=1lb, $20.00 **D**=5lb, $95.00 **E**=10lb, $180.00

Identification and history: Flour corn has soft starchy kernels easily ground into flour. Flint corn has flinty kernels often used to make corn meal and grits (**680-692**). Dent corn with indented kernels is eaten fresh or as grain. Field corn is for animal forage and silage (**8058**).

Sweet corn first appeared in commerce in 1828 and became popular a generation later. Sweet corn became the first crop to be hybridized, most of the open-pollinated varieties disappeared between 1930 and 1970. All sugary enhanced sweet corn traces back to a single inbred developed in the 1960s in Illinois by Dr. Dusty Rhodes, ILL677a. Our trialers have found SE corn to be especially suitable to our climate, with good cool-soil tolerance and a near-perfect blend of sugars and corn flavor.



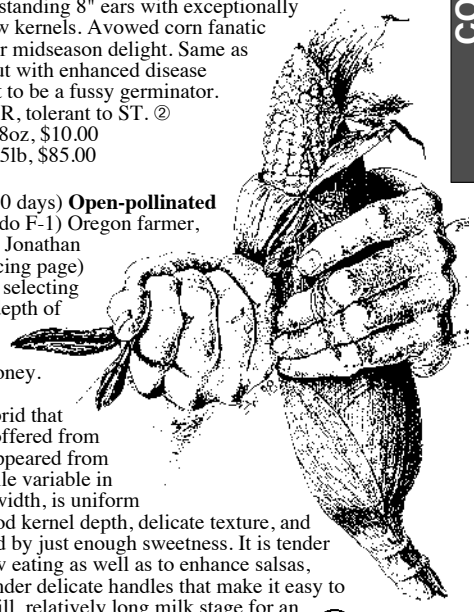
524SB Sugar Buns (74 days) **Homozygous sugary enhanced F-1 hybrid** from Crookham with sublime tenderness. About as sweet as our palates like, but not cloying like the supersweets. Sugar Buns does not have as good cold-soil emergence as other early corns. Tolerates NCLB, ST. ②

A=1oz, $2.30 **B**=8oz, $10.00 **C**=1lb, $19.00 **D**=5lb, $90.00

541BS Bodacious RM (77 days) **Homozygous sugary enhanced F-1 hybrid**. A bold flavor for a bold name, Crookham's Bodacious RM dependably produces outstanding 8" ears with exceptionally sweet corny tender yellow kernels. Avowed corn fanatic Eric Sideman's choice for midseason delight. Same as the original Bodacious but with enhanced disease resistance. Some report it to be a fussy germinator. Resistant to MDMV and R, tolerant to ST. ②

A=1oz, $2.60 **B**=8oz, $10.00 **C**=1lb, $18.00 **D**=5lb, $85.00 **E**=10lb, $160.00

544HO Top Hat OG (80 days) **Open-pollinated** (F-6 selection from Tuxedo F-1) Oregon farmer, breeder and seed grower Jonathan Spero (profiled on the facing page) spent six years diligently selecting OP sweet corn lines for depth of flavor, sweetness and tenderness to give the hybrids a run for their money. Tuxedo was a yellow sugary-enhanced F-1 hybrid that we regarded highly and offered from 1995-2012 before it disappeared from production. Top Hat, while variable in ear length (6–7 1/2") and width, is uniform where it counts most: good kernel depth, delicate texture, and full corny flavor balanced by just enough sweetness. It is tender enough to make good raw eating as well as to enhance salsas, chowders etc. Boasts slender delicate handles that make it easy to pick and husk, good tip fill, relatively long milk stage for an OP and holding ability off the stalk. An Organic Farming Research Foundation (OFRF) grant stimulated this new breakthrough in OP breeding. Our hats are off to Mr. Spero as we see the fruits of so many long efforts in organic breeding beginning to ripen. (Spero also bred Solstice broccoli.) Ω ①



A=1oz, $4.00 **B**=8oz, $18.00 **C**=1lb, $32.00 **D**=5lb, $150.00 **E**=10lb, $280.00

547HS Honey Select (80 days) **TripleSweet sugary enhanced F-1 hybrid**. For those who like firm flavorful crunchy kernels, here is one honey of a corn that pops in your mouth with a distinctive sweetness that mixes well with its flavor. During the taste test, evaluator Heron Breen said it took all his will power not to gobble every ear from Donna Dyrek's table. He said that it tasted "like the best corn of my childhood." Honey Select produces refined 8" ears with 18–20 rows of subtly colored golden-yellow kernels. Contains 25% supersweet kernels on each ear but need not be isolated from other varieties to retain optimal flavor. ⑥

A=1oz, $2.30 **B**=8oz, $10.00 **C**=1lb, $19.50 **D**=5lb, $95.00 **E**=10lb, $180.00

561NM Incredible RM (85 days) **Homozygous sugary enhanced F-1 hybrid**. Crookham's superior late-midseason gourmet selection was a full tassel-length ahead of the competition at our trial, where its handsome 8" tip-filled yellow ears were incredibly scrumptious. Incredible is not merely sweet, it really delivers a deep corn taste. Good husk protection and tolerance to ST, enhanced resistance to MDMV, SCLB and R. Poor cold-soil emergence. ②

A=1oz, $2.50 **B**=8oz, $10.00 **C**=1lb, $19.00 **D**=5lb, $90.00 **E**=10lb, $170.00

564KK Kandy Korn (89 days) **F-1 sugary enhanced hybrid**. Attractive deep purple husks and excellent holding quality make this a real winner at roadside stands. One of the first sugary enhanced varieties, Kandy Korn has stood the test of time and continues to enjoy well-deserved popularity. Tolerant to ST, R. ⑥

A=1oz, $2.50 **B**=8oz, $9.50 **C**=1lb, $17.00 **D**=5lb, $75.00 **E**=10lb, $145.00

We Test Sweet Corn, Beet, and Chard Seed for Transgenic Contamination

To help ensure the purity of our seed, we have for the past sixteen years employed industry leader Genetic ID to test samples of our sweet corn lots for the presence of transgenic contamination. Because of the risks posed by production of genetically engineered Roundup Ready beets, we have added beet and chard varieties to our GE testing program.

We remove any lots that test positive for transgenic contamination.

A negative test result, while not *guaranteeing* genetic purity, improves your chances that the seed is uncontaminated. These tests are expensive, but in a time of genetic roulette, they are necessary though not sufficient to assure seed purity. Only if the seed trade takes an adamant position that we will not tolerate GE contamination in our product can we maintain any integrity in our seed supply.

BICOLOR SWEET CORN

572LT Latte (68 days) **Synergistic F-1 hybrid**. We know what you're thinking: How could we replace Luscious with a corn named after a bourgie coffee drink? But after our taste test, even staff skeptics were won over: "WOW, Corn plus Sugar!" "Beautiful bicolor, best flavor!" and "Full ears, full kernels!" Every tip was filled out on these super-early extra-fancy 8" ears with 14 rows. Such high quality and great taste is normally reserved for a later-maturity slot, but why not start the first corn picking with the good stuff? While it often bears only a single ear per stalk, Latte is easy to grow and exceeds its predecessor in cold-soil emergence. So, have a Latte and breathe a sigh of sweet (corn) relief. We suggest staggered plantings for successive harvests. Intermediate resistance to R and ST. ②
A=1oz, $3.20 **B**=8oz, $15.00 **C**=1lb, $28.00 **D**=5lb, $130.00 **E**=10lb, $250.00

574ES Espresso (70 days) **Synergistic F-1 hybrid**. Quicker than quicksilver, fleeter than Fleet, springier than Spring Treat, Espresso bursts out of the gate and flashes to the finish. Has become Eric Sideman's new favorite early sweet corn; he says it has better flavor than Spring Treat. He seeds Espresso in the last week of April and transplants to the garden the first week of May using row covers for added warmth and frost protection. Direct seeding without row covers, trialer Donna Dyrek in 2012 in Zone 4 Hartland, ME, clay loam, enjoyed her first ears on Aug. 18. Though not as long as the midseason corns, these 6" ears retained the good balance between sweet and corny that will satisfy your early corn craving. Tolerates R, ST. ②
A=1oz, $3.00 **B**=8oz, $13.00 **C**=1lb, $25.00 **D**=5lb, $110.00 **E**=10lb, $210.00

582AM Ambrosia (75 days) **Homozygous sugary enhanced F-1 hybrid**. Ah! Those heavenly moments of high summer! Out of the pot come steaming ears of bicolor bliss covered with dewdrops of condensation. Into my mouth where the tender corny kernels mix their sweetness into a total sensation of ambrosial delight. Our corn tasters, for all their enjoyment of the process, are a contrary lot, so when they come to consensus, as they did on Ambrosia, we knew we'd found something good. Ambrosia is perfect for a wide range of markets, from fresh home-garden use to long-distance shipping. The 6½' plants show good early vigor. In stressful conditions the tips don't always fill. Tolerates ST. ②
A=1oz, $2.30 **B**=8oz, $10.00 **C**=1lb, $19.50 **D**=5lb, $95.00 **E**=10lb, $180.00

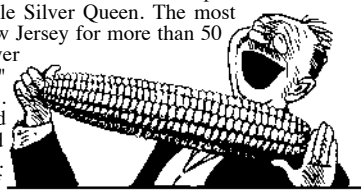
590CP Cappuccino (78 days) **Synergistic F-1 hybrid**. Farmer Hannah Hamilton asks "Who is this barista-gone-corn-breeder?" The answer is Seneca Vegetable Research of Hall, NY, breeders of eastern-adapted cultivars. However, we can't figure out the Starhusks-themed variety names either (Espresso, Cafe, Latte). With its strong flavor and performance, Cappuccino moves into the slot abandoned by Lancelot. Large full sweet tender creamy kernels announce peak corn season has arrived. The well-filled 8" blunt ears appear overloaded with 14–16 rows. In the drought of 2016, the sturdy thick stalks proved stress tolerant, allowing extended picking and second ear production. Rest assured we aren't gentrifying the corn patch—we're just looking for the tastiest ways for you to spend your Cornbucks. ②
A=1oz, $3.00 **B**=8oz, $13.50 **C**=1lb, $25.00 **D**=5lb, $120.00 **E**=10lb, $225.00

592SP Sparkler (78 days) Put a sparkle on your face next August with this handsome high-yielding **synergistic F-1 hybrid** bicolor corn. The long fat pointy ears, up to 9" with up to 18 rows, speak loudly of abundance and satisfy the most discriminating of palates. Plenty of good husk protection, long flag leaves and tillers for market growers who demand a strong easy-to-harvest plant. Ripened for Donna Aug. 23, 2010, from a June 3 sowing, two days ahead of her **541** Bodacious. Tolerates R and ST. ②
A=1oz, $3.00 **B**=8oz, $12.00 **C**=1lb, $23.00 **D**=5lb, $110.00 **E**=10lb, $210.00

604SD Serendipity (82 days) **Sugary enhanced TripleSweet F-1 hybrid** spiked with **25% supersweet genes** (no, they're not transgenic!) Full-bodied flavor with good balance between sugary and traditional corn taste. Serendipity has the soft-crisp creamy texture and heavenly bouquet to savor again and again. Along with **547** Honey Select, one of Heron's favorites in the 2011 trials. Isolate from other sweet corn varieties to bring out its best. Market growers will like its extended harvest window. Features 7–8" bicolor ears with good tip fill. Resistant to SCLB. ⑥
A=1oz, $2.30 **B**=8oz, $10.00 **C**=1lb, $19.00 **D**=5lb, $90.00 **E**=10lb, $175.00

WHITE SWEET CORN

636LO Luther Hill OG (82 days) **Open-pollinated**. This rarely offered heirloom developed by Luther Hill of Andover Township, NJ, in 1902, is one of the parents of the venerable Silver Queen. The most popular sweet corn in parts of New Jersey for more than 50 years. Sweetest OP corn I've ever tasted, Luther makes multiple 3–6" miniature ears on modest 4' stalks. Because the suckers often yield good ears, each plant, if spaced widely, can make up to four ears. A great way to introduce yourself to sweet corn the way it was before the hybrids took over. ①



A=1oz, $2.60 **B**=8oz, $13.00 **C**=1lb, $24.00 **D**=5lb, $110.00 **E**=10lb, $210.00

639GU Augusta (84 days) **Homozygous sugary enhanced F-1 hybrid**. Having supplanted even the venerable Silver Queen in our estimation, Augusta is one sweet corn variety we will not be without. Beginning Aug. 18, we enjoyed two weeks of delectable delirium with this empress of white sweet corn that achieves the pearly mean in good eating quality. Maturing before **658** Silver Queen, it bears perfect substantial 8–8½" cylindrical ears with dark green husks that sit low on 6½' stalks for easy harvest and almost always fill to the tips. "2–3 ears per stalk, sweet and juicy" says Ohio's Janine Welsby. ⑤
A=1oz, $2.60 **B**=8oz, $11.00 **C**=1lb, $20.00 **D**=5lb, $90.00

652TO Tuxana OG (86 days) **Open-pollinated.** (F-6 selection from Anasazi Sweet x Tuxedo) Twin variety to **544** Top Hat, also developed by Oregon farmer/seed grower/breeder Jonathan Spero out of Tuxedo. Admiring its beautiful bright white kernels in 14–16 rows and 9" ears with great tip fill, one could easily have mistaken it for a hybrid such as Augusta or Silver Queen. In our 2014 taste-off its tender mouthfuls burst with sweetness. However, as with all open-pollinated corns, its optimal picking window is narrow. As the harvest of midseason varieties tapers off, 86-day Tuxana begins. Now I think all late-summer corn feasts will be formal affairs with Tux required. Ω ①

A=1oz, $4.00 **B**=8oz, $18.00 **C**=1lb, $32.00 **D**=5lb, $150.00 **E**=10lb, $280.00

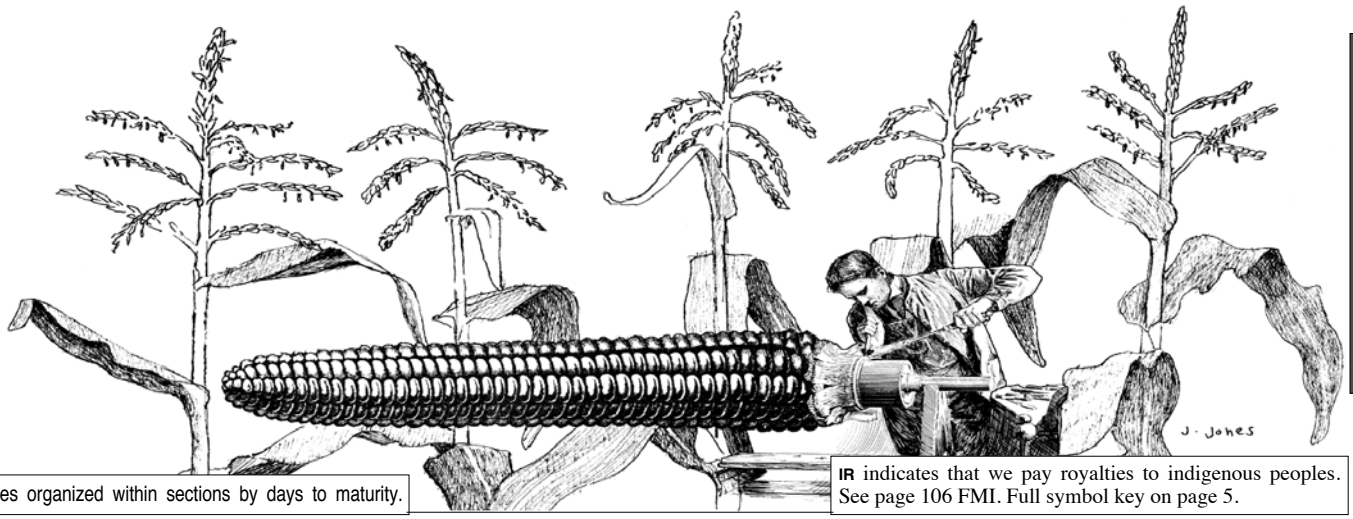
658SQ Silver Queen (96 days) **F-1 hybrid**. Like Sugar & Gold to the previous generation, Silver Queen has become so classic as to constitute a generic brand. Most farmers claiming to offer it have long since switched to more modern hybrids. However, we know some who still prefer to grow the real Queen, and that's what we offer. Queen has long set the standard for late-maturing sweet corn with large handsome ears, replete with glossy white creamy sweet kernels that fill to the very tips. CR uses it as a succession to **639** Augusta. It came in on Aug. 31, 2012, and blessed his first week of September with its delicious lovely ears. In colder climates it sneaks in just ahead of those first killing frosts late in September. Other varieties may be sweeter, but we can't think of a better way to end the corn season. *Caution: said to germinate poorly in cold soil, though we have received few complaints*. Tolerates NCLB, SCLB, ST. ⑥
A=1oz, $2.00 **B**=8oz, $9.60 **C**=1lb, $18.50 **D**=5lb, $84.00 **E**=10lb, $160.00

SWEET CORN SELECTIONS AT A GLANCE

variety	item #	days	color	type*	avg height	ear length	# rows
Cafe	506	68	yellow	se-su-sh2	60-72"	8"	14-16
Ashworth	516	72	yellow	op	60"	6-7"	12
Sugar Buns	524	74	yellow	se-se	76"	6-7"	14
Bodacious RM	541	77	yellow	se-se	87"	8"	18
Top Hat	544	80	yellow	op	60-72"	6-7.5"	12-14
Honey Select	547	80	yellow	se-se-se	84"	8"	18-20
Incredible RM	561	85	yellow	se-se	90"	8"	18
Kandy Korn	564	89	yellow	se	102"	8"	16
Latte	572	68	bicolor	se-su-sh2	48-72"	8"	14
Espresso	574	70	bicolor	se-su-sh2	72"	6"	12-16
Ambrosia	582	75	bicolor	se-se	78"	8"	16
Cappuccino	590	78	bicolor	se-su-sh2	72-84"	8"	14-16
Sparkler	592	78	bicolor	se-su-sh2	84"	8-9"	16-18
Serendipity	604	82	bicolor	se-se-se-sh2	75"	7-8"	16-18
Luther Hill	636	82	white	op	48"	3-6"	12
Augusta	639	84	white	se-se	78"	8-9"	16-18
Tuxana	652	86	white	op	108"	9"	14-16
Silver Queen	658	96	white	su	102"	8"	14-16

*genetic type
op = open-pollinated
su = normal sugary
se = heterozygous sugary enhanced
se-se = homozygous sugary enhanced
se-su-sh2 = synergistic
sh2 = supersweet
se-se-se = TripleSweet® sugary enhanced

If you plant corns of different color kernels next to each other, you will get some cross-pollination. To maintain color purity, plant each variety in rows that are 8-10' apart.



Varieties organized within sections by days to maturity.

IR indicates that we pay royalties to indigenous peoples. See page 106 FMI. Full symbol key on page 5.

POPCORN

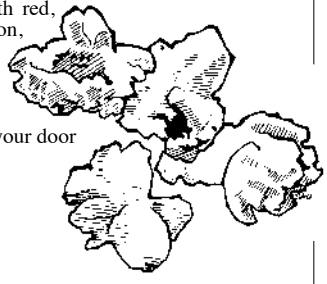
Seed counts vary widely among varieties.

671RW Robust 98114W White (98 days) **F-1 hybrid**. Taller, a bit later, higher yielding with larger kernels and ears, and greater ease of popping than the old Robust 21-82W, this midseason white hulless popcorn has great eating quality—crisp and tender, light and flaky. The 6' plants have the stalk strength to survive September storms intact. "Nice long thin ears," says market grower Jason Kafka. ②
A=1oz, $2.50 **B**=8oz, $10.00 **C**=1lb, $16.00 **D**=5lb, $75.00 **E**=10lb, $140.00

675DO Dakota Black OG (100 days) **Open-pollinated**. Outstanding in our observation plots two years in a row. Compact plants with one ear each. Our tasters rated the popcorn "Oh, so scrumptious." In addition to their popping qualities, Dakota Black's 4½" dark maroon-black ears with 15 rows are extremely decorative, a must for the fall roadside stand. 4' stalks. Ω ①
A=1oz, $3.30 **B**=8oz, $15.00 **C**=1lb, $28.00 **D**=5lb, $135.00 **E**=10lb, $250.00

677BO Pennsylvania Dutch Butter Flavored OG (102 days) **Open-pollinated** popcorn so good on its own that you won't need to add any butter. Our trialers agreed that it was the best they'd ever tasted: creamy, buttery and delicious. Incredibly green and healthy 8' plants with very long dark green leaves set two 4–6" stocky ears per stalk, with 26–28 rows (occasionally 22) of fat creamy white kernels. Thanks to our friends at Southern Exposure Seed Exchange for enabling us to offer this pre-1885 Pennsylvania Dutch heirloom. SESE was the first to bring this variety to commerce, in 1988. ①
A=1oz, $3.00 **B**=8oz, $13.00 **C**=1lb, $24.00 **D**=5lb, $105.00 **E**=10lb, $200.00

679CP Calico (105 days) **Open-pollinated**. An heirloom dual-purpose corn with 5–8" ears that look like smaller versions of Indian corn. The shiny bright ears come in an array of colors, with red, yellow and mottled rosy-brown most common, but brown, purple, blue, white and other combinations possible. Kernels are smaller than those of most Indian corns, but larger than conventional popcorns. Calico is both decorative and edible so you can hang it on your door in fall and pop the very same batch on Thanksgiving. Seed grown by the Biseks in Minnesota. ~200 seeds/oz. ①



A=1oz, $2.50
B=4oz, $8.00
C=1lb, $24.00

While I fill this out, I'm munching on popcorn and slurping tomato soup … all from you (kind of). Here's to growing FOOD from FEDCO seeds!
– Scout Proft, East Dorset, VT

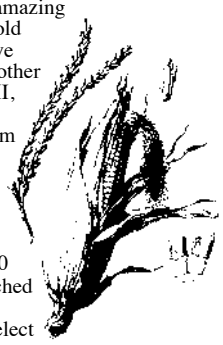
Pest: Corn Earworm
Cultural controls: use resistant varieties with tight husks such as **541** Bodacious RM or **658** Silver Queen, choose short-season varieties, release trichogramma wasps. (Beneficial insects are available from Beneficial Insectary at insectary.com or 800-477-3715.)
Material controls: *Bt Kurstaki* (**8753-6** on the flip side), Spinosad (**8762**)

Pest: European Corn Borer (ECB) and fall armyworm
Cultural controls: mow and disk old corn stalks into the soil, release trichogramma wasps (found to give better control than insecticides in research by Cornell's IPM program on five organic farms) for ECB; none known for fall armyworm.
Material controls: *Bt Kurstaki*, Spinosad

FLINT, ORNAMENTAL & FLOUR CORNS

Average 100-160 seeds/oz. All open-pollinated. Days to maturity are for dry stage.

680PO Painted Mountain OG (85 days) Short efficient 5' plants, long thin 6–7" cobs. Painted Mountain is the hardiest, fastest-maturing grain corn in the world. Dave Christensen has spent 40 years developing it in the mountains of Montana from a diverse gene pool of about 80 strains of native corns. Contains vivid golds, oranges, reds and purples, about every shade of color known to corn. High in anthocyanins and has amazing 13% protein levels. Bred to withstand high winds, cold temperatures, intense heat and drought, and to survive global warming. Painted Mountain grows where no other corn can. In the chilly microclimate of her Tustin, MI, farm, most of Betsy Erickson's plants survived and recovered from a monumental hail/wind/thunderstorm on July 27, 2014. Her real thrill was in grinding and using the cornmeal, which is very tasty in pizza dough and in her Swedish Knäckebröd (recipe on our website). Ω ①



A=1oz, $4.00 **B**=8oz, $18.00
C=1lb, $30.00 **D**=5lb, $135.00 **E**=10lb, $265.00

682CO Abenaki Calais Flint OG (88 days) Coached by Dave Chistensen of Painted Mountain fame, our grower, Adam Nordell, has worked diligently to reselect Abenaki Flint back towards its original form. Because Christensen holds great appreciation for this eastern "brother" to Painted Mountain, calling it "the toughest of all the Eastern corns," he lauds the restoration. The original, kept by the northern Vermont Abenaki tribe, was selected for generations to produce ears that are long, thin and cylindrical, with an even 8 rows all the way to the shank. This form is valuable for drying early in the short Northeast season, before it can spoil from the freezes, surviving even the legendary summer of 1816 ("Eighteen hundred and froze to death.") The 7–9" ears are either solidly golden yellow or a beautiful dark maroon, with some skewing a bit towards orange shades. Tom Vigue says it's better adapted to our climate than Floriani; he prefers growing Abenaki, but prefers eating Floriani. **IR** ①
A=1oz, $2.50 **B**=8oz, $10.00 **C**=1lb, $19.00 **D**=5lb, $85.00 **E**=10lb, $160.00

688FO Floriani Red Flint OG (100 days) *Z. m.* var. *rostrato* Steady appreciation from corn aficionados has now replaced the unprecedented demand this variety first enjoyed when we lauded it as an exceptionally beautiful variety with fabulous flavor. The red pointed kernels (white when immature) are easy to shell and grind into a fine pinkish meal that bakes with an appealing spongy texture. Floriani's richly sweet delicious corny taste beat the competition silly in our pancake and cornbread muffin bake-off. Moreover with a 12% protein content, compared to about 9% for most other varieties, it's a beneficial staple as well. Heirloom from the Valsugana Valley of Italy and brought to wider attention by William Rubel, it was once the staple polenta corn in the valley and was named for Rubel's friends who've grown it there for many years. ①
A=1oz, $2.50 **B**=8oz, $11.00 **C**=1lb, $20.00 **D**=5lb, $95.00 **E**=10lb, $180.00

692HO Hopi Blue OG (100 days) Precursors of this strain have been raised continuously for 800 years on the mesas of northern Arizona and are used by the Hopis to make ceremonial *piki* bread. Tall 9' plants produce large 8–10" ears with beautiful deep kernels easily ground into flour. Very drought-tolerant, with a long taproot. Dick Burnham of Talking Crow Organic Farm in western Massachusetts reports it is not just for flour, it is good to eat, "crunchy, corny and wholesome." **IR** ②③
A=1oz, $3.50 **B**=8oz, $15.00 **C**=1lb, $26.00 **D**=5lb, $120.00 **E**=10lb, $230.00

For Dent or Field corn, pg 129
Cress: see Greens, pg 29

Cucumbers

Cucumis sativus ~**35 seeds/g; ~1000 seeds/oz; variations noted.**

Varieties are arranged by days to maturity within cucumber types.

Culture: May be started indoors for early production, or direct-seeded. Very tender, will not survive frost. Direct seed 3" apart thinning to 1' apart in rows 4-6' apart or 6 per mound in hills 4' apart thinning to 3 best plants. Transplant 1' apart in rows 4-6' apart. Do not sow in cold soil.

Cucumbers require good fertility and regular rain or irrigation for abundant yields. Without adequate water, fruits will be misshapen and bitter. Combat striped cucumber beetles by handpicking early AM when the dew makes them sluggish, or use floating row covers, removing when cukes flower. Cucumber beetles are the vector for BW. Pick cukes frequently for best production, or else the plants shut down. Make sure to remove blimps to the compost pile.

Parthenocarpic varieties (**1214**, **1239**, **1380**, **1392**) can set fruit without being pollinated, an advantage in cold cloudy summers. Gynoecious varieties (**1214, 1232**, **1328**) produce almost exclusively female flowers for uniformity and high yields.

Minimum germination temperature 60˚, optimal range 65–95.

Days to maturity are from direct seeding, except where noted. From transplants, subtract 20 days.

Diseases:

ALS	Alternaria Leaf Spot	PM	Powdery Mildew
ANTH	Anthracnose	PRSV	Papaya Ring Spot Virus
BW	Bacterial Wilt	R	Rust
CMV	Cucumber Mosaic Virus	WMV	Watermelon Mosaic Virus
CVYV	Cucumber Vein Yellow Virus	ZYMV	Zucchini Yellows Mosaic Virus
DM	Downy Mildew		

PICKLERS

1214RN Ronda (50 days) F-1 hybrid. In our 2015 pickling cuke trial, Ronda caught our fancy. From 3 short-vined plants we harvested upwards of 130 handsome dark green gherkins over 4 weeks. Gynoecious, parthenocarpic and early, Ronda also sported lasting foliage health in a bad PM season. For those perfect tiny sour pickles with fine crunchy texture, we recommend picking fruits at 3" long or smaller. Not at all bitter, Ronda is sweet and buttery when raw, large or small. "The Ronda cucumber seeds were a bit pricey but they all grew and you forgive them their cost when you pick them—three times as prolific as any others we planted and most excellent flavor," testify Nancy and Bruce Nickel of Mountain Home, AR. Intermediate resistance to CVYV, CMV, PM. 1g has ~40 seeds. Sold by seed count. ④

A=10 seeds, $4.00 **B**=40 seeds, $15.00
C=160 seeds, $50.00 **D**=400 seeds, $110.00

1218SS Sassy (52 days) F-1 hybrid. Although rated mid-late season by its breeder, this cuke is sassy enough to produce like crazy in the early slot. Though some picklers tease you with a handful at first picking, just three Sassy plants yielded more than 25 flawless very dark green 4" fruits during their first week of harvest. Vigorous long vines, dark green healthy foliage and predominately female flowers continue this bounty, barely slowing after 4 more harvest weeks. Uniform long narrow pickles are sweet, crisp and thin skinned. Perfect for whole dills, but versatile for any favorite pickle recipe. High resistance to scab and ANTH. Intermediate resistance to CMV, ALS, PM. ⑤

A=1g, $1.50 **B**=4g, $3.60 **C**=16g, $8.00 **D**=32g, $10.00
E=112g, $32.00

1226NL National (52 days) Open-pollinated. Introduced in 1929, the result of a 5-year collaboration between the National Pickle Packers Association and the Michigan Agricultural Experiment Station. Suitable for both small pickles and dills. Holding quality over a long season, the firm black-spined dark green fruits are usually quite sweet, rarely bitter. Plants are vigorous dependable producers. Resists CMV and scab. ②

A=1g, $1.30 **B**=4g, $2.60
C=16g, $4.00 **D**=32g, $5.00
E=112g, $12.00 **K**=448g, $32.00

1232CS Calypso (52 days) Heavy-yielding gynoecious hybrid developed by North Carolina State. Fruits medium-dark green with white spines. In a trial of 7 pickling varieties at Highmoor Farm, Calypso showed prolific fruit set and had the highest early yield. Tolerant to ANTH, ALS, CMV, DM, PM, resistant to scab. ②

A=1g, $1.30 **B**=4g, $2.60 **C**=16g, $4.00 **D**=32g, $6.00
E=112g, $15.00 **K**=448g, $40.00

1234CC Cross Country (57 days) F-1 hybrid. Named for its widespread adaptability, Cross Country goes the distance. The best pickler in our trials, it bears abundant blocky straight dark green white-spined fruit of uniformly good quality with very small seed cavities. Our trialer described its sweet taste as "crunchy and cool." Had good yields (5½ lb per plant), appearance, and long uniform fruit in Highmoor Farm trial. Has been highly rated in brine tests. Resistant to scab, but susceptible in our trial to BW. Resistant to ANTH, ALS, PM and DM. ⑤

A=1g, $1.50 **B**=4g, $3.60 **C**=16g, $8.00
D=32g, $13.00 **E**=112g, $36.00 **K**=448g, $125.00

1239LO Little Leaf H-19 OG (60 days) An open-pollinated white-spined parthenocarpic cucumber, Little Leaf sets fruit without pollination, so may be left under row cover the entire season. Compact vines with smaller-than-normal leaves save space and leave the mature cucumbers much more visible. Despite the plants' emaciated appearance, they produce a huge number of cukes, even under stress. The blocky fruits are a little smaller than what we were used to, but they serve a dual purpose, pickling well while also providing good fresh eating. Has become a big customer favorite and rated as Donna Dyrek's top choice among the 21 picklers in her Zone 4 2015 trial. Bred in the Ozarks at the University of Arkansas and released in 1991. Resistant to ANTH, ALS, DM, CMV, PM, scab. ①③

A=1g, $2.00 **B**=4g, $4.00 **C**=16g, $7.00 **D**=32g, $10.00
E=112g, $26.00

SLICERS

1302MN Ministro (49 days) F-1 hybrid. This sprinter is the Usain Bolt of the cucumber world. Ripened for Donna Dyrek on July 15, 2012, a full 20 days ahead of Marketmore, even though she didn't set her transplants out until June 22. Vigorous plants with excellent cover bear high-quality cylindrical 8–9" monoecious fruits of the American slicer type, shiny and thin-skinned. Snappy and crispy, sweet and crunchy. They were still loaded with fruit and continuing to flower right into October. "I could go out and pick another mess now," reported Dyrek on Oct. 11. Supplier is discontinuing so this will be the last year. Resistant to PRSV, WMV, ZYMV. ⑤

A=1g, $4.00 **B**=4g, $12.00 **C**=16g, $36.00 **D**=32g, $65.00

Marketmore 76 (63 days) Dr. Henry Munger's classic open-pollinated cucumber for the ages, long the leading slicing variety in the Northeast, we still sells nearly 5,000 packets per year! Dark green 8–8½" fruits show good uniformity. Vines vigorous throughout season. Resistant to CMV, DM, PM, and scab.

1312MM Marketmore 76 ②

A=1g, $1.30 **B**=4g, $2.00 **C**=16g, $4.00 **D**=32g, $5.00
E=112g, $12.00 **K**=448g, $31.00

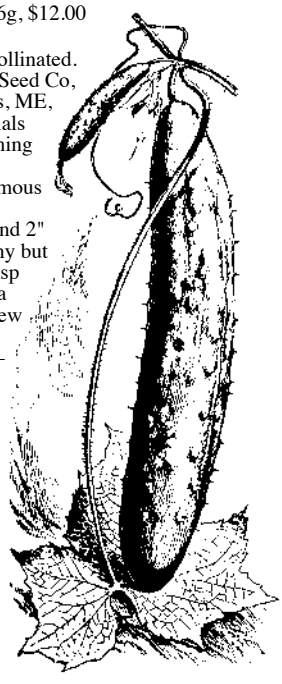
1313MO Marketmore 76 OG ③

A=1g, $1.40 **B**=4g, $2.50 **C**=16g, $4.00 **D**=32g, $5.60
E=112g, $14.00

1328GL General Lee (66 days) F-1 hybrid. "General Lee does amazingly well here. Guess he's glad to be back home. Yields longer than any other through heat, humidity, drought and bugs," relates Linda Paul of Barhamsville, VA. Also a pretty fair performer up north, this gynoecious General continues to conquer some Yankee gardeners and farmers. High yields of uniform straight dark-green white-spined 8–8½" slicers don't peter out in the halcyon days of summer. Doesn't develop yellow "bellies" and retains that good Sweet Salad flavor. From a May 13 direct seeding, my 2012 harvest began July 8 and continued into late August. Despite persistent drought, half the fruits were still of marketable quality in mid-August. Resistant to scab, CMV, PM and DM. ⑤

A=1g, $2.30 **B**=4g, $4.80 **C**=16g, $12.00
D=32g, $22.00 **E**=112g, $70.00

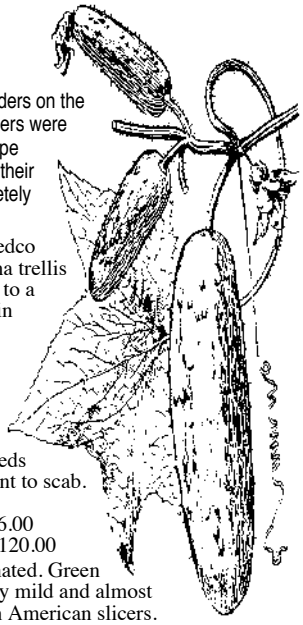
1335LO Longfellow OG (70 days) Open-pollinated. Bred and released in 1927 by Jerome B. Rice Seed Co, Cambridge, NY. Stubborn Ox Farm of Brooks, ME, hosted Fedco's 2018 extensive slicing cuke trials with hybrid and OP types locking horns. Winning easily was white-spined classic Longfellow—fitting, as Maine whelped and educated the famous author. Extra-good Fellow came into picking mid-late season, but we found the 8–9" long and 2" wide stage to be eating perfection: skin crunchy but not tough, sweet and full cuke flavor, flesh crisp but then immediately juicy and melting, with a small seed core. Steady vigor and yield with few duds. Light green and striped blossom end. Originally prized as a "straight pack" for high-grade markets across the Northeast, Longfellow or its close derivatives have been used by innumerable breeders to impart similar ideal length, dark green color, and excellent flavor. In its heyday, Longfellow was revered across the Northeast, Mid-Atlantic, and even into Minnesota. Its revival should easily reach as far. ② **NEW!**



A=1g, $1.80 **B**=4g, $4.50
C=16g, $9.00 **D**=32g, $15.00
E=112g, $35.00 **K**=448g, $120.00

BEIT ALPHA TYPES

Descended from a vegetable that grows wild in the dry climate of the Middle East, developed in Israel by breeders on the Beit Alpha kibbutz. These small sweet-fleshed cucumbers were originally popular in the Mediterranean, spread to Europe and thence to the States. They don't dehydrate easily, their thin skins don't require peeling, they are almost completely burpless and have a long shelf life.



1380SO Socrates OG (52 days) F-1 hybrid. Fedco website guru Clayton Carter makes this Beit Alpha trellis cuke his top choice for protected culture. Trained to a manageable 6' height, Socrates lacks for nothing in vigor or foliage health. The strong thick stems steadily set straight 7–8" fruit. Smooth thin dark green skin gives way to crunchy sweet seedless pale green flesh. With its tolerance of cool temps and its disease-resistance, Socrates makes a "most excellent" variety to return your high-tunnel investment. Parthenocarpic. *Note:* Seeds will result if insect pollination is allowed. Resistant to scab. Intermediate resistance to PM. ~31 seeds/g. ④

A=15 seeds, $8.20 **B**=30 seeds, $16.00
C=60 seeds, $29.00 **D**=300 seeds, $120.00

1382SZ Super Zagross (54 days) Open-pollinated. Green smooth-skinned fruits refreshingly cool, enjoyably mild and almost completely free of the bitterness quite common in American slicers. Zagross sustains its cropping power, so the cukes will keep coming as long as you keep harvesting. Elaine Carlson makes succession plantings two weeks apart for "months of good eating. So thin-skinned, juicy and refreshing." ②

A=1g, $1.60 **B**=4g, $2.50 **C**=16g, $6.00 **D**=32g, $10.00
E=112g, $26.00

LONG-FRUITED TYPES

Long-fruited Asian cukes are more resistant to CMV than other types.

For really straight fruit, consider trellising your cukes. Adam Tomash and June Zellers grow theirs on a 5' arch made from cattle panel, a welded wire material with big holes. They explain this trellis system in an article ("In Search of the Perfect Tomato Trellis") that appeared in the winter 2008-2009 MOF&G.

1392TE Telegraph Improved European (60 days) Open-pollinated. "A consistent performer in our greenhouse," said Michael Goldman of Florence, MA. Also suitable for growing outdoors, this European cucumber has long (10–14") slim smooth-skinned fruits of very delicate mild flavor, seldom bitter and containing few seeds. Telegraph Improved was selected from Telegraph Long, one of the original parthenocarpics, which the folks at Baker Creek date back to 1897. Trellis vines for better-quality straight cukes. Parthenocarpic. ~33 seeds/g.②

A=1g, $2.40 **B**=4g, $8.00 **C**=16g, $22.00

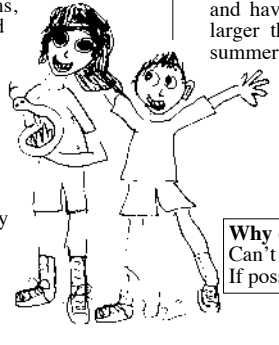
1394SO Suhyo Long OG (61 days) Open-pollinated. Known for its sweet mild burpless flavor, this Asian cucumber grows up to 15" long with a curly shape if unsupported. For straighter fruit that packs better, Jason Kafka grows these in his greenhouse in vertical hedges, stretching Trellis Netting (**8859** in the OGS section) between conduits. According to Tom Vigue these make good dense pickling cukes if picked young enough. Sets well in heat. Resists PM. ①

A=1g, $2.20 **B**=4g, $4.40 **C**=16g, $9.00 **D**=32g, $14.00

1396KO Shintokiwa OG/BD (62 days) Open-pollinated. Tom Vigue and Adam Tomash both recommend this productive smooth-skinned long slender cucumber that first surfaced in the Turtle Tree catalog. The hands-down winner at Tomash's trial, combining looks, health and flavor. Rated by Tomash as superior to the Suhyo cultivars with better uniformity, fewer defective bottoms and more resistance to BW. The fruits, averaging 9–10" and growing up to an edible size of 1' in good fertility, are sweet, crisp and juicy without bitterness. One trial taster described their flavor as "flowery, buttery and delicious." Robert Wasserman of Wasserman Family Farm in Corrales, NM, reports that they have a faithful following at the growers' market—even among little kids. Editor Elisabeth Benjamin's favorite for fermented pickles. ①

A=1g, $2.20 **B**=4g, $5.50 **C**=16g, $16.00 **D**=32g, $26.00

1388PS Painted Serpent (55 days from transplant) *C. melo* var. *flexuosus* Open-pollinated. Also known as Armenian Cucumber or Snake Melon, native to Armenia and brought to Italy in the 15th century. William Woys Weaver says, "This is one of the oldest of our heirlooms, yet one of the most neglected by our gardeners," oft exhibited but seldom eaten. Yet its flavor surpasses that of cucumbers, excelling in salads and stir-fries without bitterness or burps. Slender slightly fuzzy flexuous fruits delicately coil like a serpent with alternate light and dark green stripes. Culture like the melon it is, starting indoors in individual pots and transplanting into a low tunnel. Will grow up to 30" but best eaten at 8–18". Straighter if trellised. Never grew well on CR's central Maine clay, but a prolific producer on his sandy Colrain, MA, soil, beginning as early as July 26 one warm dry season. Bite into the snake that doesn't bite back! ~24 seeds/g.③



A=1g, $1.40 **B**=4g, $2.40 **C**=16g, $4.20
D=32g, $7.00 **E**=112g, $16.00

SPECIALTY CUKES

Poona Kheera OG (60 days) Open-pollinated. Too many off-types in all our current seed sources. *Not available in 2019.*

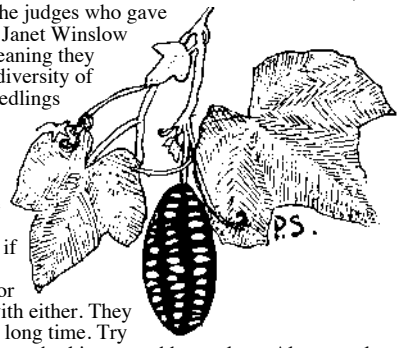
1311BO Boothby's Blonde OG (63 days) Open-pollinated. Maine boasts an heirloom cucumber, maintained for five generations by the Boothby family of Livermore. Boothby's short plump oval fruits average 3–4" and become yellower as they mature. Creamy exteriors with contrasting black spines and juicy refreshing interiors. Larger seed cavities than most cukes, but the seeds actually add to the mild sweet flavor that makes the fruits so good for eating out of hand. Boothby's usually lacks the bitter aftertaste so common in many of the other white cukes we've trialed. Has the "cool" texture uncommon in American cukes. Boothby's goodwill ambassador Will Bonsall originally passed it on both to Pinetree Seeds and to us. ①③

A=1g, $2.20 **B**=4g, $3.50 **C**=16g, $8.00 **D**=32g, $15.00
E=112g, $30.00

1318SO Silver Slicer OG (64 days) Open-pollinated. Psst! We'd love to pass on a secret known to few: this superior Cornell University slicer may be the best eating cucumber of them all. Megan Rulli of Piney Moutain Orchard in Gardners, PA, calls SS "the cucumber of my dreams." Incorporates all of the good features of **1311** Boothby's Blonde in a better package. Longer (7–8") and slimmer (fairly narrow 1" core) than Boothby's with a creamy-white tender skin. Heavy set of buttery crunchy crisp fruits, neither watery nor ever bitter. Resists PM and keeps going till September. Seed for this variety is sold under a license and a portion of the proceeds goes to support public vegetable breeding at Cornell. ~51 seeds/g. **BR** ①

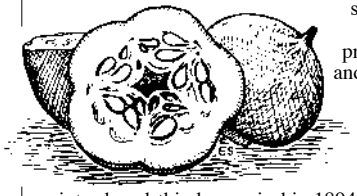
A=1g, $1.80 **B**=4g, $4.50 **C**=16g, $9.00 **D**=32g, $15.00
E=112g, $35.00

1243MG Mexican Sour Gherkin (65 days) *Melothria scabra* Open-pollinated. Also known as Cucamelon or *Sandía de ratón* ('Mouse Watermelon' in Spanish). Native to Mexico and Central America and a staple in diets there since pre-Columbian times. We love the unusual, so when we saw these darlings on exhibit at Common Ground Fair in 2004, we found them irresistible. So did the judges who gave them a coveted Judges' Award. Janet Winslow calls them a "gateway" crop, meaning they inspire fairgoers to explore the diversity of available food crops. Wimpy seedlings grow into rampant yet delicate scrambling vines covered with dozens of 1" green and white fruit that look like miniature watermelons but taste more like cucumbers, with a crunchy texture and a slight sour zing as if they were already pickled. Botanically neither cucumber nor watermelon, they won't cross with either. They don't bruise and they keep for a long time. Try them in stir fries, pickle them as gherkins, or add to salsas. Also popular among trendy bartenders. Easy to grow, and fun! Slightly more tolerant of cold than cukes, and more drought-resistant. Benefits from a fence or trellis so 10' vines can climb. ~350 seeds/g. ②



A=0.2g, $2.50 **B**=1g, $6.00

1372LM Lemon (68 days) Open-pollinated. Would you buy a lemon from Fedco? A lot of people will buy this lemon beloved by salad chefs and backyard gardeners alike for its heavy yields of rounded 3" fruits shaped somewhat like lemons. Color evolves from pale greenish yellow (immature though preferred by some customers as most tender and least seedy) to lemon yellow (best eating stage for most) to golden yellow (full maturity and seed production).Very crisp and sweet; never gets bitter and one of the best for eating right out of the garden. Samuel Wilson of Mechanicsville, PA, introduced this lemon in his 1894 catalog. Resists R, tolerates drought and some fungal diseases that attack other white cucumbers. ②



A=1g, $1.50 **B**=4g, $2.50 **C**=16g, $4.00 **D**=32g, $5.00
E=112g, $12.00

1375RO Richmond Green Apple OG (70 days) Open-pollinated. What's refreshing and juicy, lemon-shaped and comes from Australia? This hard-to-find heirloom cucumber. Years ago, we feasted on them in our trials and have grown them often since. Beautiful lime green, they get slightly larger than lemons with sweet mild flavor that really satisfies on a hot summer day. ①

A=1g, $1.80 **B**=4g, $3.00 **C**=16g, $8.00 **D**=32g, $14.00

Power to the people.....not corporations.
Thanks for all your work preserving seeds.
– Benjamin Tipton, West Burke, VT

Why don't you folks offer _____? (please fill in the blank)
Can't find your favorite variety? Please send us your suggestions.
If possible, please identify your past source for the varieties.

EGGPLANT

Solanum melongena

0.2 gram packet ~33-66 seeds.

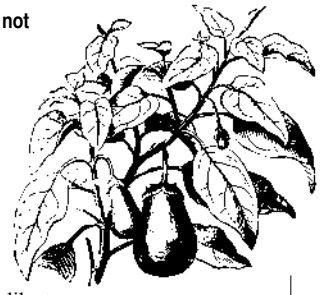
Culture: Growing eggplant is a challenge in the north. We recommend raised beds, row covers (**8874**, **8877**) and plastic (**8418**) or IRT mulch (**8421**). Our selections are the most reliable producers we've found, yet some seasons even our skilled trialers get only sparse production of ripe fruits.

Minimum germination temperature is 60˚, optimal range 75–90˚. Some varieties require fluctuating day and night temperatures.

Days to maturity are from date of transplanting, not seeding.

Pests: See sidebar below for information.

Disease: V = Verticillium



PURPLE ITALIAN TYPES - BELL-SHAPED

3677GA Galine (72 days) F-1 hybrid. A classic early bell-shaped Italian-style eggplant that sets fruit and produces early and dependably in the North. Adam Tomash and June Zellers rated it the earliest in their trials, and almost on a par with **3691** Rosa Bianca, their favorite, for flavor. "Mild with a pudding-like texture when cooked," they report. Plus it had larger fruit, averaging about 1 lb each, and was less fussy than Rosa. Trialer Tom Vigue used a high tunnel and reported "phenomenal" eggplants. Galine plants were "4' high and, not exaggerating, 5 lb yield per plant, easily." ⑤

A=0.2g, $3.20 **B**=0.4g, $5.00 **C**=1g, $8.90 **D**=4g, $28.00 **E**=28g, $180.00

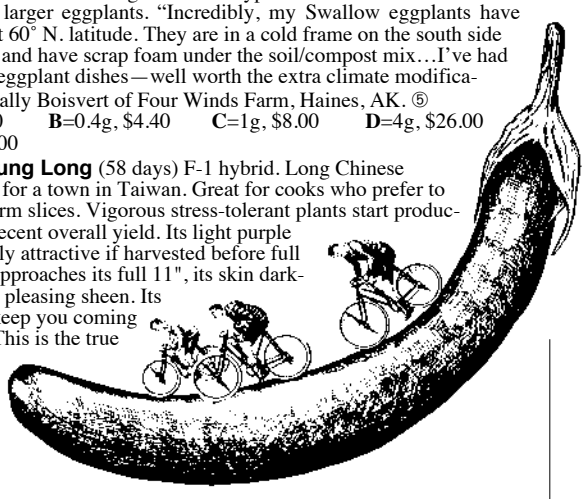
3685BK Black King (79 days) F-1 hybrid. A fine hybrid eggplant from Takii in Japan, good for the main crop. A vigorous grower and high yielder suitable for both greenhouse and open-field cultivation. Shiny bulging 7" oval fruits outperformed Diamond in Adam Tomash and June Zellers' trial. Their two King plants produced 11 ripe fruit averaging 0.9 lb. Tolerates excess heat. ⑤

A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $5.00 **D**=4g, $15.00 **E**=28g, $75.00

PURPLE ASIAN TYPES - ELONGATED

3666SW Swallow (51 days) F-1 hybrid. The one eggplant to grow if you live in a cold part of the world. For *early* production of glossy purple-black tender 1¾x7" fruit of the elongated Asian type without the bitterness often associated with larger eggplants. "Incredibly, my Swallow eggplants have produced here at 60˚ N. latitude. They are in a cold frame on the south side of a greenhouse and have scrap foam under the soil/compost mix…I've had many delicious eggplant dishes—well worth the extra climate modifications," reports Sally Boisvert of Four Winds Farm, Haines, AK. ⑤

A=0.2g, $2.70 **B**=0.4g, $4.40 **C**=1g, $8.00 **D**=4g, $26.00 **E**=28g, $130.00



3673PL Pingtung Long (58 days) F-1 hybrid. Long Chinese eggplant named for a town in Taiwan. Great for cooks who prefer to work with uniform slices. Vigorous stress-tolerant plants start producing early for a decent overall yield. Its light purple color is especially attractive if harvested before full maturity. As it approaches its full 11", its skin darkens but retains a pleasing sheen. Its sweetness will keep you coming back for more. This is the true hybrid strain that has better quality and flavor than the more common open-pollinated strain. ③

A=0.2g, $1.70 **B**=0.4g, $2.70 **C**=1g, $4.00 **D**=4g, $6.00 **E**=28g, $18.00

3684DO Diamond OG (78 days) Open-pollinated. Kent Whealy brought this elongated slightly tapered dark purple eggplant back from Ukraine in 1993. 2' plants set 2½x7" slender 12 oz fruits in clusters. Firm flesh has good texture and entirely lacks that bitter eggplant taste. Because of its mild flavor and good cold-climate adaptation, Diamond is growing in popularity. Our trialer in Maine had an average yield of 4 lb per plant. ①

A=0.2g, $2.30 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=4g, $8.50 **E**=28g, $44.00

Pest: Colorado Potato Beetle
Cultural controls: Rotation; control solanaceous weeds like horse nettle; rapid flaming; suction devices; hand-picking if beetle pressure is low; mulch before adults arrive.
Materials: Surround (**8720**), Spinosad (**8762**), Pyrethrin (**8765**)
For more about CPB, see p. 124 in the Seed Potato section.

Non-Purple EGGPLANTS

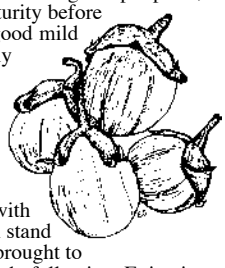
3679AO Annina OG (64 days in unheated tunnel, 72 days open field) F-1 hybrid. Annina's slightly curved **extended-teardrop** shape is covered with **purple and lavender streaks with emanations of ivory and light pink**. From the ½ lb, 5" baby size to the 1½ lb, 8" premiums, the glossy gorgeous skin and cream-white flesh are irresistible. We found the open field trial productivity on par with high-bar setters Galine and Diamond, a welcome surprise from a dual-purpose inside-outside variety. The healthy upright structure and thornless light green calyx add to this showcase of thoughtful breeding: rugged and bountiful for OG growing, picker-friendly, nice "half-long" size, and so stunning you just have to show everyone. Also, trials manager Heron could not resist a variety with the same name as his "super-duper" niece. ④ **NEW!**

A=20 seeds, $6.80 **B**=100 seeds, $30.00 **C**=500 seeds, $130.00 **D**=1,000 seeds, $240.00

3680AO Applegreen OG (74 days) Open-pollinated. Developed in 1964 for short-season areas by legendary University of New Hampshire plant breeder Elwyn Meader. Chinese Red (*S. integrifolium)* is in the parentage. This rounded 6x4½" light **apple-green bell-shaped** eggplant is fairly early and productive. Fruits average 8 oz. Our tasters rated it the "sweetest green variety" and noted its nice texture and good flesh-skin ratio. Non-bitter, tender and flavorful mild white flesh. ①

A=0.2g, $2.10 **B**=0.4g, $3.60 **C**=1g, $7.00 **D**=4g, $14.00

3682PW Pure White (75 days) F-1 hybrid. Asian eggplant features beautiful **elongated cylindrical** curved 12x1½" **off-white** fruits that go a long way. The most productive variety in our 2013 trial averaged 4 per plant, with significant ripening around Sept. 4 and 70% maturity before frost. Our trialers noted its "creamy nice texture," "good mild flavor," with "slight non-bitter aftertaste," "moderately chewy skin" and sweetness. One observed that its sharper-than-expected flavor sweetens when fried. ③



A=0.2g, $1.50 **B**=0.4g, $2.00 **C**=1g, $3.00 **D**=4g, $6.00 **E**=28g, $28.00

3688RO Rosita OG (84 days) Open-pollinated. Rosita is productive and tasty without a hint of bitterness. These **pear-shaped pink-lavender** fruits with white shoulders are 6–8" long and 4–6" wide and will stand up in any Solanum beauty contest. Heirloom Rosita, brought to the States from Puerto Rico in 1979, has gained a steady following. Enjoy its sweet delicious tender white flesh. ①

A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $6.00 **D**=4g, $16.00 **E**=28g, $59.00

3691BO Rosa Bianca OG (88 days) Open-pollinated bicolor Italian heirloom. Alan LePage calls it "the best eggplant in the universe," with a creamy consistency and delicate flavor. "Head and shoulders above the rest," adds Tomash, "like eggplant pudding." "A plump beauty that likes the Michigan climate," chimes in Anne Elder. Gorgeous **rounded** fruits, **white with lavender streaking** down the side, about 3–4" across and 5" long, narrow at the top and widening with indentations almost like folds in draped fabric. Fruits average 2 lb, max out at 4 lb, LePage's highest-yielding eggplant. Rosa needs to be coddled, particularly in the northern half of New England. Seed needs alternating temperatures to break dormancy: warm days (preferably 80s), cooler nights (around 70˚). ③

A=0.2g, $1.90 **B**=0.4g, $2.80 **C**=1g, $4.00 **D**=4g, $8.00 **E**=28g, $28.00

Endive: see Greens, pg 29

FENNEL

Foeniculum vulgare

Culture: Fennel prefers rich well-drained slightly limey soil. Direct seed in late April or early May. *Do not allow to dry out.* Adequate spacing to 8-12" apart is critical. Enjoy the tender juicy thinnings. If left overcrowded *all* varieties will bolt prematurely. Has potential as a fall crop hardy to under 20˚. Sow in early summer to discourage bolting; keep soil surface moist.

All the fennels listed here are **open-pollinated**.

Days to maturity are from date of seeding.

Seed Fennel (NEW!) appears with Herbs on p. 81.

4553PO Perfection OG (72 days) Our best-selling new variety in 2013. The acme of Perfection in bulbing fennel, and a good performer in cool soils. Has shown up well in repeated trials, even in warm seasons. Nearly as bolt proof as those pricey hybrids seven times the cost and 5–7 days longer-standing than Zefa, with much thicker bulbs. Our thanks to Eric Schori of Gnarlwood Farm in Lempster, NH, who suggested Perfection. "We may not have the long springs and Willamette River silts of Corvallis, OR, but I've seen Perfection large enough to be used to subdue an ornery moose. I haven't gotten it that big here in the Northeast, but it still makes a superb bulbing fennel even at more modest sizes. Sauté with onions, yellow peppers and a little toasted sesame oil and you may [succumb to] the temptation to keep it all for yourself instead of taking it to market." ~290 seeds/g. ①

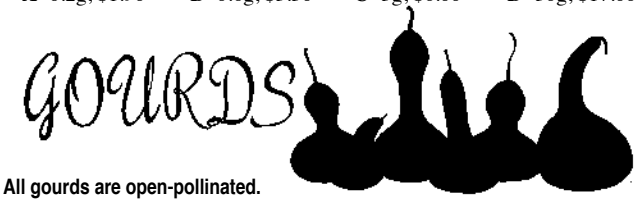
A=0.5g, $2.30 **B**=3g, $6.00 **C**=9g, $13.00 **D**=27g, $33.00

4556ZF Zefa Fino (65 days) Bulbing fennel. Grows 3' with edible blue-green stems and feathery green leaves. Bred at the Swiss Federal Research Station. Compared to some of the traditional Italian varieties such as Montovani, much more resilient under stress and much less likely to bolt. A spring planting will stand till late summer. We advise a second sowing in July for crisp juicy bulbs till October. Thin to approximately 12" apart in 18" rows. ~200 seeds/g. ③

A=0.5g, $1.90 **B**=3g, $3.60 **C**=9g, $8.00 **D**=27g, $16.00

4567BO Bronze OG (65 days) Slow grower with very thin stems valued for its striking feathery bronze foliage. Delicious and decorative. An intriguing addition to mesclun and to flower beds. ~375 seeds/g. ①

A=0.2g, $1.90 **B**=0.6g, $3.50 **C**=3g, $6.00 **D**=30g, $17.00



All gourds are open-pollinated.

SMALL GOURDS *Cucurbita pepo* var. *ovifera*

~500 seeds/oz. These vigorous viners will usually mature their ornamental fruits in our climate if direct-seeded. **Days to maturity are from date of seeding.**

1908DG Tennessee Dancing Gourd (93 days) Anyone who sees these tiny 2–3" adorable green-and-white striped bottle gourds falls in love with them. They generated quite a buzz at our Common Ground Fair booth exhibit. We received a nice letter from Junior Gordon of Primm Springs, TN, the original source for this delightful conversation piece. Gordon says these are better known as spinning gourds and advises us to select our seed crops for short, fairly thick straight necks and to rogue out those with the longer crooked necks that won't spin as well. To spin them "take the neck between your middle finger and thumb and snap your fingers with a quick action." Kids in Tennessee used to bring them to school as toys. Rampant vines are extremely prolific producers of the small fruits. Hard shells dry to tan color. ②

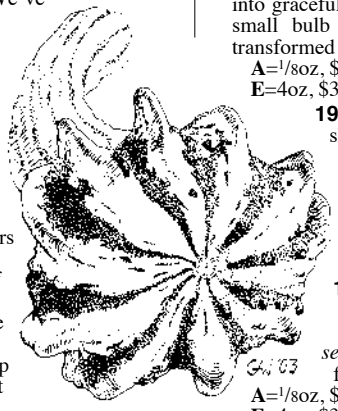
A=1/8oz, $2.40 **B**=1/4oz, $4.00 **C**=1/2oz, $7.00 **D**=1oz, $13.00 **E**=4oz, $45.00

1912SM Small Ornamental Mix (95 days) Eight kinds of early-maturing types, with small spoon, bicolored pear, and small orange most prevalent. ②

A=1/8oz, $2.10 **B**=1/4oz, $3.60 **C**=1/2oz, $6.00 **D**=1oz, $10.00 **E**=4oz, $30.00

1939PW Professional Small Warted Mix (95 days) We've jazzed up our usual warted mix with an equally fine but slightly different assortment of flats, rounds, short pears, pears and spoons in a variety of solid, striped and bicolor patterns. Yellows, greens, oranges and whites make a bright display. We love them, warts and all. ②

A=1/8oz, $2.00 **B**=1/4oz, $3.60 **C**=1/2oz, $6.00 **D**=1oz, $10.00 **E**=4oz, $32.00



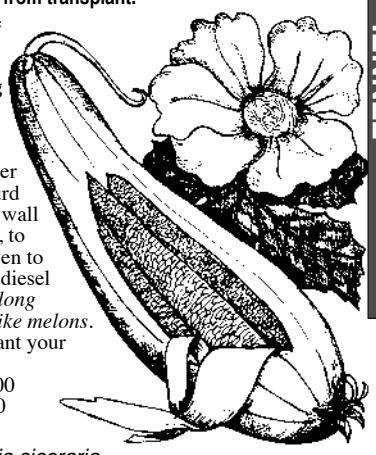
1957AW Autumn Wings (100 days) These are to gourds as the 1957 Cadillac was to cars. They have a double set of fins or wings. The car makers claimed aerodynamic advantages for their design; the gourd breeders make no such assertion. Both the gourd and the car are highly conspicuous. Autumn Wings' colors, a vivid mix of greens, yellows, creams and whites, make them even more so. Some of these gourds are straight necked and others are curved. They vary in size, too, one third small, one third medium and the remainder in the large 6–8" range. We stop short of claiming them to be the Cadillac of gourds, but bet they'll make a good roadside stand attraction. ②

A=1/8oz, $2.70 **B**=1/4oz, $5.00 **C**=1/2oz, $8.50 **D**=1oz, $16.00 **E**=4oz, $48.00

LUFFA or LOOFAH *Luffa aegyptiaca*

~280 seeds/oz. Days to maturity are from transplant.

1962LU Luffa (110 days) May be more closely related to the cucumber than to the hardshell Lagenaria. Also known as **Dishrag Gourd**, dried and used for making bath sponges. Some folks pick them young, steam and pan-fry them. In addition to being a scrubber and a comestible, this versatile gourd has been used to make soundproof wall boarding, to insulate army helmets, to stuff mattresses and saddles and even to make filters for steam engines and diesel motors! *Caution: Luffa requires a long season. Start indoors and culture like melons.* We recommend trellising if you want your luffas to remain straight. ②



A=1/8oz, $1.90 **B**=1/4oz, $3.00 **C**=1/2oz, $4.00 **D**=1oz, $7.00 **E**=4oz, $16.00

LARGE GOURDS *Lagenaria siceraria*

~120–200 seeds/oz. Days to maturity are from transplant.

Culture: Because of their long season hardshell gourds must be started indoors in our climate. To improve germination, sandpaper or clip off the radicle end and soak the seed. They resent transplanting and will grow slowly for a few weeks. Once they take off, these rampant crawlers are noted for their enormous foliage, more velvety in texture than that of other cucurbits, and their large white almost luminous night-blooming flowers. Heavy feeders, they will take up huge amounts of garden space unless trellised.

1966LB Large Bottle or **Birdhouse** (120 days) Rampant crawling vines produce large gourds with bulbous base and narrow neck, usually with a bulge at the stem end. Grow 14" tall and up to one foot in diameter. Green rind turns white or starts to brown upon maturity. When dried, make durable bottles or birdhouses. ②

A=1/8oz, $2.00 **B**=1/4oz, $3.50 **C**=1/2oz, $6.00 **D**=1oz, $9.00 **E**=4oz, $24.00

1969SO Speckled Swan OG (120 days) Fairgoers have gawked at these show-stealers, whether in Jack Kertesz' demonstration gardens or at our booth or in the Hall, for many years, admiring Swan's beautiful dark green surface with very pale green 1" splotches. Large round 8–10" base tapers into graceful long neck, sometimes straight, sometimes arched, capped by a small bulb near the stem that looks like a swan's head. Nikos has transformed one into a hunter's harp, swan head and all. ③

A=1/8oz, $2.20 **B**=1/4oz, $4.20 **C**=1/2oz, $8.00 **D**=1oz, $12.50 **E**=4oz, $34.00

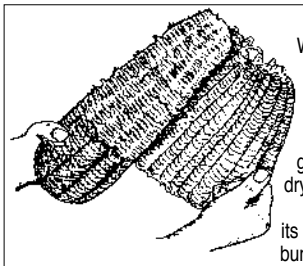
1974CC Corsican Canteen (125 days) Sets 3–6 fruits per plant, shaped like an old-fashioned canteen with height of 3 1/2" and a 7" diameter, some larger. Can be used to make lovely lidded bowls. Amy LeBlanc's exhibit at 2013 Common Ground was the best and largest of these I've ever seen. She starts them in her hoop-house. Originally from Native Americans in New Mexico. ②

A=1/8oz, $2.20 **B**=1/4oz, $4.20 **C**=1/2oz, $8.00 **D**=1oz, $12.50 **E**=4oz, $34.00

1990BS Bushel (135 days) Shaped like a large bowl with a pot lid on it. Can grow enormous given sufficient heat, but in Maine will probably max out at 18" across. *Caution: requires a long season to mature.* To improve your chances, limit each vine to one fruit. Prune to halt vine growth after it sets its first fruit. ②

A=1/8oz, $2.20 **B**=1/4oz, $4.20 **C**=1/2oz, $8.00 **D**=1oz, $12.50 **E**=4oz, $34.00

How to Produce a Luffa Sponge



When luffas are ripe their skins turn brown and dry and stems turn yellow. Check your plants frequently and harvest only ripe gourds. Full-sized fruit that are still green produce soft, fine-textured sponges that don't last. After the first killing frost remove any nearly ripe gourds to a warm well-ventilated place to allow them to dry. Gourds left wet for long will readily discolor.

If the luffa has just ripened, gently squeeze and pop its skin. Break the blossom end cap and pull the vascular bundle (that's the sponge!) up the side of the gourd like a zipper. The sponge will pop out, wet and white. Quickly rinse it in water to prevent oxidation.

If gourds are too dry to pop the sponge out, ret them (thoroughly soak in water) for several days until the skin sloughs off leaving only the spongy fiber. After retting, shape and dry the sponge. Remove seeds either before or after retting. We found it easy to do before retting: cut open the larger end of the gourd and either shake or rinse out the seeds. If you wish to whiten the sponges, bleach by soaking either in a 10% bleach solution or in hydrogen peroxide. Rinse luffas thoroughly in clean water and dry before use.

Gourds come in two major categories (Luffa is a third). The small ones are *Cucurbita pepo* var. *ovifera*, known as ornamental gourds for their variety of shapes, colors and surfaces. The larger ones are *Lagenaria siceraria* or hardshell gourds, named from the Greek *lagenos,* 'a flask,' and *sicera*, 'an intoxicating drink.' *Lagenaria*, though lacking the color range of their smaller cousins, fascinate with their magical shapes.

Curing Lagenaria Gourds is Easy.

Hardshell gourds are 90% water at harvest. They need to be cured or dried, a slow process of evaporation through the outer shell, which is covered by a thin ivory-green skin. Curing can take 6 weeks to 1 year (average time 4 months) depending on gourd size, thickness of shell, weather and storage conditions.

Immature gourds (that have not developed a thick shell) will rot after harvest. Mature gourds are large and weighty. To cure, store off the ground in a well-ventilated room or unheated outbuilding. For a smooth beige surface, scrape off the outer skin after it loosens and darkens. (Freezing and thawing loosens the outer skin.) Outer skin, if left on, may become moldy; mold-patterned skin will dry to the gourd shell and can be sanded off, painted over or incorporated into the decoration.

GRAINS

The selections here are rare heirloom varieties, **all open pollinated**, especially chosen for small-scale production. Revived interest in food security and sovereignty inspires us to seek edible and heirloom grains.

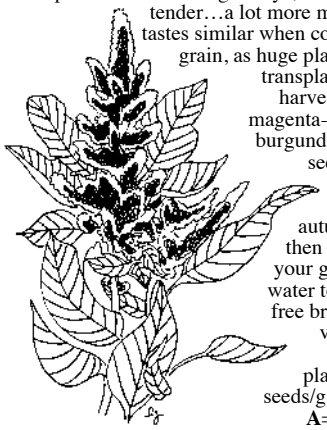
For barley, oats, wheat, and cover crops check out our Farm Seed section beginning on page 126.

For ornamental grains, see amaranth, p. 85; millet, p. 93; oats, sorghum, p. 97; wheat, p. 100.

MESO-AMERICAN "GRAINS"

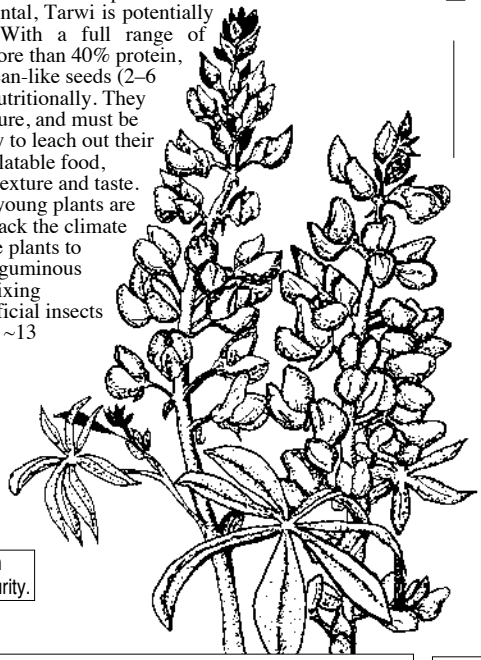
4300OO Opopeo Amaranth OG *Amaranthus hybridus* (125 days to seed) The grain of the gods from Opopeo, Mexico. Amaranth was one of the Aztecs' five principal crops. They ground puffed seeds into flour and prepared sauces with the leaves. Amaranth grain has 14–16% protein. Used as a green until flower-set (~65 days). Tom Vigue sows thickly after frost danger, enjoying the bronze-green leaves from 4–6" and the top leaves until the plant reaches 2'. Vigue says, "Never stringy, always tender…a lot more massive than spinach," to which it tastes similar when cooked. Not great raw. Thin to grow grain, as huge plants require 2' spacing, or start as transplants to increase chances of beginning your harvest before heavy autumnal rains. Opopeo's magenta-purple stems grow 4–8' topped by 2' deep burgundy flower spikes each laden with 4–8 oz of seed grain. Grain matures from early to mid October. Cut and hang the heads to dry inside rather than field-curing in wet autumns. Wait until grain is crumbly dry and then rub against a mesh screen to thresh. Store your grain securely; mice love it. Boil two parts water to one part grain for a high-protein gluten-free breakfast cereal or mix with pumpkin meal, vegetables and herbs, allow to harden, and slice into fryable patties. Multi-branched plants prone to lodging in loose soils. ~1250 seeds/g. ①

A=1g, $2.40 **B**=4g, $6.00 **C**=16g, $14.00



4314TW Tarwi *Lupinus mutabilis* (130 days, longer to seed) We thank Gary Kaszas of Fort Fairfield, ME, for providing us with the impetus to offer Tarwi, one of the "lost" crops of the Incas. Years ago he sent us seeds he had accessed from the USDA seed bank for this wild-looking 3' lupine native to the high Andes. In our trials, we were attracted to its flowers, mostly sky blue with yellows, reds and whites interspersed. More than just a beautiful ornamental, Tarwi is potentially an important food crop. With a full range of essential amino acids and more than 40% protein, its luminous pearly-white bean-like seeds (2–6 per pod) surpass soybeans nutritionally. They require a long season to mature, and must be soaked and rinsed repeatedly to leach out their bitter alkaloids to make a palatable food, somewhat akin to barley in texture and taste. Start the seed indoors—the young plants are frost sensitive. Even if you lack the climate or the dedication to grow the plants to seed, all is not lost. These leguminous beauties grow in poor soil, fixing nitrogen and attracting beneficial insects with honey-scented flowers. ~13 seeds/2g packet. ✿ ⑤

A=2g, $2.90
B=6g, $7.50
C=18g, $18.00
D=54g, $40.00



Varieties organized within sections by days to maturity.

RICE *Oryza sativa*

Grow rice in Maine! Wild Folk Farm, growers of Akamuro, Hayayuki and Titanio, started with 5g of each from the USDA and have been selecting the best traits from each variety. All four of our rices were grown in central Maine, Zone 5a/4b. ~30 seeds/g.

Lowland varieties are traditionally grown in wet clay paddies or riparian areas, although flooding is not necessary. They are typically shorter and produce more tillers than upland rice, 30-50 per plant.

Upland varieties grow in drier conditions, but also do well in flooded clay paddies. Upland rice is taller and has fewer tillers than lowland. Each tiller is thicker and will produce more seeds, 12–24 tillers per plant.

Culture: For both types, a rotation of saturated and very short (a few days) dry periods is ideal from late May to June. After that, cycling water patterns is less important but still helpful. Keep paddies flooded (but not stagnant) if you can. Dryness during the second half of the summer shouldn't affect yields much, just maturation time and weed pressure. For transplants, start at 70–85˚ indoors 4–5 weeks before setting out into rich moist warm soil (early June in Maine). Space plants 10–12" apart in full sun. May be direct seeded in warmer regions. Heads the first week of Aug. and finishes by late Sept. If you live in a dry place, add 1–2 weeks to maturity dates. It's possible to harvest 6–10 lb of rice from a 100' row.

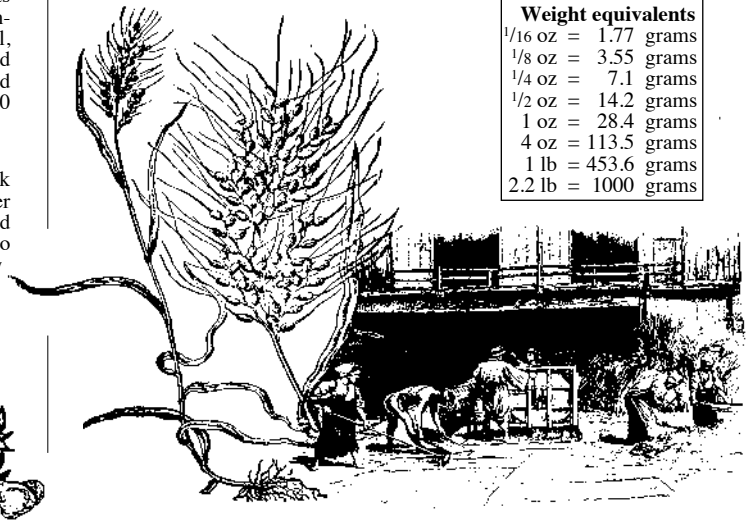
Want help processing your rice? Contact wildfolkfarmers@gmail.com

Days to maturity are from transplant. Add 20 days for direct seeding.

4310AM Akamuro (105 days) A fast-maturing **lowland** rice, *aka* means 'red' in Japanese, and *muro* is 'root cellar' or 'ice house.' Originating in Hokkaido, Japan, this delicate rice, one of the skinniest, is a true heirloom. The aromatic seeds mature from pearly white to red. Hulls are burnt orange when mature, making Akamuro extremely ornamental. The bobolinks (or ricebirds) love to share the harvest. Hardy to Zone 4b from transplant. Regardless of water management, this rice doesn't produce many tillers from transplant, so it is a good candidate for direct sowing in 5a or warmer. ①

A=1g, $1.50 **B**=4g, $3.50 **C**=28g, $9.00 **D**=112g, $30.00

Weight equivalents		
1/16 oz	=	1.77 grams
1/8 oz	=	3.55 grams
1/4 oz	=	7.1 grams
1/2 oz	=	14.2 grams
1 oz	=	28.4 grams
4 oz	=	113.5 grams
1 lb	=	453.6 grams
2.2 lb	=	1000 grams



4311HY Hayayuki (105 days) A **lowland** rice, *hayayuki* is Japanese for the first snow of the season, which perhaps coincides with its harvest in colder climates. Very nutty and full flavored. Fast to mature, it can work in Zone 4b in paddies from direct sowing but does best from transplants. Sensitive to dry weather, for large yields Hayayuki craves saturated soil until July. Tops out at about 3'. ①

A=1g, $1.50 **B**=4g, $3.50 **C**=28g, $9.00 **D**=112g, $30.00

4312DO Duborskian OG (115 days) Roberta Bailey got this **upland** short-grain hardy Russian variety from Seed Savers Exchange member Anpetu Oihankesni of Colorado. Well adapted to dry-land production, sturdy plants resist lodging, grow to 20–24" producing 12–18 tillers per plant, each bearing a rice pannicle. Can withstand a light frost. May be direct seeded in warmer regions. ①

A=1g, $1.80 **B**=4g, $5.00 **C**=28g, $28.00 **D**=112g, $90.00

4313TT Titanio (120 days) An **upland** short-grain brown rice from Italy. Used for risotto with creamy texture and great flavor. Very dense spiraling seed heads. Zone 5a from transplant. ①

A=1g, $1.50 **B**=4g, $3.50 **C**=28g, $9.00 **D**=112g, $30.00

Supplier Codes Know where your seed comes from! Details on page 5.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Manufacturers of neonicotinoids: Syngenta.

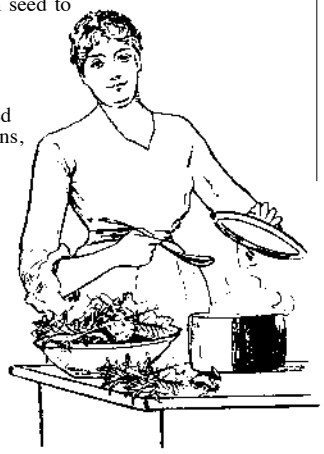
Seedy Saturdays are an institution in Canada. They are not one event, but a series of separate events, which have sprung up across the country, each individually and uniquely organized under the same general themes of encouraging the use of open-pollinated and heritage seeds, enabling a local seed exchange, and educating the public about seed saving and environmentally responsible gardening practices. They usually occur on a Saturday, hence the name, but also occur on other days. They are a fun and inexpensive way to talk and swap seed.

All greens are open-pollinated except where noted.
Days to maturity are from direct seeding. Look for the snowflake symbol ❄ after each cultivar description for indication that a variety is hardy through at least a part of our Maine winter.

GREENS MIXES

2992ME Mesclun According to Rosalind Creasy, the original mesclun used all parts of the tongue, with a range of textures from crispy to velvety and of tastes from tangy to bitter. Our mixture consists of two packets: **2980** (p. 36) Lettuce Mix and **2996** Mustard Mix. Harvest these greens by cutting the leaves with scissors, leaving 1–2" of foliage as well as the apical bud and several small leaves surrounding it, so that they can grow back. Plant each packet in adjoining beds or rows so that the mustards won't overwhelm the lettuces. Plant lettuces about 4 weeks earlier for them to mature at the same time. You can enhance your mesclun by adding other greens such as mâche, claytonia and bronze fennel. Add edible flowers of garlic chives, nasturtiums, violas, signet marigolds, borage and mustard blossoms to lend further appeal to the mix, creating delectable color, taste and texture contrasts. ①②③⑤
A=1g, $2.10 **B**=4g, $5.00 **C**=14g, $10.00 **D**=28g, $18.00
E=112g, $60.00

2993GO Greens Mix OG Versatile companion to **2981** Organic Lettuce Mix (pg 36). At least five varieties, certified-organic seed, chosen from among beets, chard, arugula, mustards, orachs, purslane, chervil and kales suitable for mesclun or braising. Exact components will vary according to availability. For a fully organic salad, from seed to table. ~470 seeds/g. ①②
A=1g, $2.10 **B**=4g, $5.00
C=14g, $10.00 **D**=28g, $18.00
E=112g, $60.00



2996MM Mustard Mix A newly formulated mix of our beautiful mustards. Includes greens, purples, pinks, streaked and frilled varieties. ~450 seeds/g. ①②③
A=1g, $1.80 **B**=4g, $4.00
C=14g, $8.00 **D**=28g, $13.00
E=112g, $38.00

2998BR Braising Mix (40 days) A quick-growing mix of delicate and sturdy greens (and purples) full of flavor and body. Harvest from baby stage into maturity for a continuous mess of greens in your bowl. ~300 seeds/g. ①④⑤
A=1g, $2.10 **B**=4g, $5.00
C=14g, $10.00 **D**=28g, $18.00
E=112g, $60.00

❄ Season-Extending Greens ❄

Greens marked with ❄ at the end of their descriptions are hardy through at least a portion of our winters in Zones 4 and 5, and probably with protection can survive the entire winter in Zone 6 and south. We continue our trials to add to this selection.

Cabbage pg 14
3391 Deadon Savoy Cabbage
3397 Wirosa Savoy Cabbage

Greens: Arugula pg 27
3020 Astro Arugula
3021 Ice-Bred Arugula
3027 Sylvetta Arugula

Greens: Specialty pg 29
3050 Claytonia
3102 Verte de Cambrai Mache

Greens: Asian pg 31
3204 White Flowered Kailaan
3218 Senposai
3220 Tatsoi
3257 Chinese Thick-Stem

Greens: Mustards pg 32
3236 Golden Frill
3239 Pink Lettucy Gene Pool
3241 Spicy Green
3243 Green Wave
3245 Red Giant

Kale & Collards pp 35-36
3449 Scarlet Kale
3450 Dwarf Blue Kale
3452 Redbor Kale
3453 Winterbor Kale
3457 Rainbow Lacinato Kale
3458 Baltisk Kale
3459 Darkibor Kale
3460 Russian Frills Kale
3461 Red Russian Kale
3464 White Russian Kale
3441 Vates Collards
3442 Cascade Glaze Collards
3443 Champion Collards

Lettuce pp 36-41
2988 Winter Lettuce Mix
2791 Tango Looseleaf
2786 Red-Tinged Winter Looseleaf
2789 Merlot Looseleaf
2788 Oscarde Oakleaf
2781 Merlox Red Oak
2796 Lollo Rosso
2814 North Pole Butterhead
2816 Winter Marvel Butterhead
2849 Winter Density Romaine
2865 Rouge d'Hiver Romaine
2886 Winter Wonderland Romaine

Spinach pg 58
2510 Space
2512 Olympia
2538 Avon
2540 Bloomsdale
2555 Giant Winter
2558 Winter Bloomsdale

Parsley pg 83
3158 Gigante d'Italia Parsley
3166 Double Curled Parsley
3169 Krausa Parsley
3170 Dark Green Italian Parsley

Miscellany
3471 Kolibri Kohlrabi (pg 35)
2393 Gilfeather Turnip **greens** (pg 73)

ARUGULA *Eruca sativa*

~12,000-15,000 seeds/oz. Also known as Roquette or Rocket. Musky green and its piquant blossoms will spice up your salad. **Culture:** Prefers cool temperatures; direct seed as early as possible in spring. Bolts readily in heat; much better as a fall crop or succession planted. Use row covers to discourage flea beetles. I let some spring plants grow to seed and am rewarded with a self-sown September and October patch that is delicious and has no flea beetle damage! A prime ingredient in tangy mesclun mixes. Frequent watering will reduce its pungency. Suitable for microgreens.

3020SO Astro OG (35 days mature, 21 days baby) After my first taste I was tempted to wisecrack that Astro is to real arugula as Astroturf is to real grass. But that would be grossly unfair. Yes, its pleasant tender texture and mild flavor might be a slight letdown for those of us who prefer our arugula more piquant. However, we found out when it debuted in our catalog that many people prefer this milder strain, making it a top seller. Selected for profuse basal growth, Astro rockets into dense clusters of thick lush leaves for baby-greens harvest. Leaf shapes are a mix of smooth-edged and lobed. Grows equally well during cool and hot seasons, Astro came to us highly recommended by our West Coast seed farmers for its dependability and yield. ❄ ①
A=1/16oz, $2.00 **B**=1/8oz, $3.50 **C**=1/2oz, $4.00 **D**=1oz, $7.00
E=4oz, $15.00 **K**=1lb, $54.00

3021CO Ice-Bred OG (44 days) For my money, the best arugula to be found anywhere. Brett Grohsgal crossed two excellent European heirloom strains in 1989 and subsequently selected for cold hardiness and vigor, in the end breeding one tough cookie. Mid-ribs and whole leaves develop a lovely purple hue in winter freezes. Recovers in spring even if plant goes dormant under very cold conditions. Seedlings can stand drought, compete against weeds and don't require high soil fertility. They have been 1–2 days slower to bolt than other arugulas in my spring-sown plots. This is arugula with more bite, vigorous with complex full flavors. **BR** ❄ ①
A=1/16oz, $2.40 **B**=1/8oz, $4.00 **C**=1/2oz, $6.50 **D**=1oz, $10.00
E=4oz, $32.00

3022AR Arugula (47 days) The best-tasting and most bolt-resistant of the strains in our 2017 trials (**3021** Ice-Bred was not included in that test). Stood temperatures down to 14° double-covered under Agribon 19. ②
A=1/16oz, $1.40 **B**=1/8oz, $2.10 **C**=1/2oz, $3.00 **D**=1oz, $4.00
E=4oz, $6.00 **K**=1lb, $16.00 **L**=5lb, $70.00

3023AO Arugula OG (47 days) ①③
A=1/16oz, $1.60 **B**=1/8oz, $2.50 **C**=1/2oz, $3.50 **D**=1oz, $5.00
E=4oz, $10.00 **K**=1lb, $30.00 **L**=5lb, $140.00

3027SY Sylvetta Wild Arugula (50 days mature, 21 days baby) *Diplotaxis erucoides* Also known as Rucola Selvatica, a must for extraordinary cold-season salads. A wild form of arugula, very deeply lobed dark green narrow leaves grow steadily, reaching 3" in 3 weeks, the perfect length for a 7" salad plate. Nutty, sweet, crisp and moderately spicy, Sylvetta grows foliage right to the rib base, no stem to trim. Please your restaurant accounts with this beautifully uniform arugula strain. Slower growing, smaller and more pungent than regular arugula. Out-competed 8 other commercial-production strains in our summer endurance trial. Highly recommended for market farmers and gardeners alike. Eliot Coleman lists it as one of his winter staples in *The Winter Harvest Handbook* (**9822**). ~110,000 seeds/oz. ❄ ②
A=1/16oz, $1.80
B=1/8oz, $3.00
C=1/2oz, $8.00
D=1oz, $12.00
E=4oz, $40.00
K=1lb, $150.00

BR = Breeder Royalty. We pay royalties to independent breeders. More information on p. 106. Complete symbol key on p. 5.

Such an annually exciting event to receive the catalog, then read the catalog, then plan the garden, then order the seeds. I. Love. Fedco!!!!
– Katherine Hubert, Seattle, WA

CHARD *Beta vulgaris* (cicla group)

~600–2,500 seeds/oz.

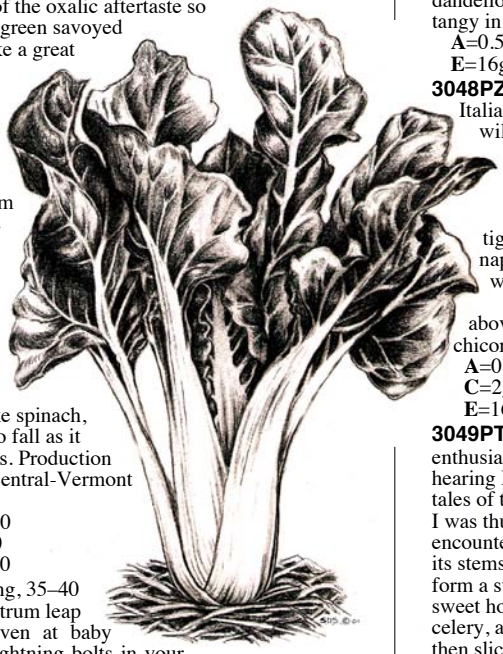
Culture: Hardy and easy to grow. Same species as beets. Plants will grow quite large. Space according to use—can be direct-seeded 2" apart for baby-leaf harvest; thin to 12–16" apart for large leaves. Soften thick ribs of chard, beets and other greens by braising. Also used for microgreens.

Minimum germination temperature 40˚, optimum range 50–85˚.

3031FG Fordhook Giant (50 days) Broad white stems, leaves dark green and savoyed with white veins. The standard variety, introduced by Burpee in 1934. ②⑤

A=1/16oz, $1.40 **B**=1/8oz, $2.00 **C**=1/2oz, $2.50 **D**=1oz, $4.00
E=4oz, $7.00 **K**=1lb, $18.00 **L**=5lb, $75.00

3033AG Argentata (55 days) Vigorous long-standing 2–3' plants tolerate a wide variety of weather conditions. Broad silvery-white midribs with a crispy sweet succulence and none of the oxalic aftertaste so common in other chards. The deep green savoyed leaves with a mild clean flavor make a great substitute for spinach in omelettes, pasta dishes and casseroles. ②



A=1/16oz, $1.70 **B**=1/8oz, $2.60
C=1/2oz, $5.00 **D**=1oz, $7.00
E=4oz, $22.00 **K**=1lb, $72.00

3034PS Perpetual Spinach or **Leaf Beet** (55 days) Thanks to Pam Dawling for suggesting we add this member of the chard family. Leaf beet should be cultured like any other chard variety. It looks similar to other swiss chards, but its stems are thinner and its exceptionally tender leaves are smoother, not puckered. It tastes unlike any other chard, imparting a spinach-like flavor that lingers pleasantly. Unlike spinach, Perpetual lasts through summer into fall as it withstands light and moderate frosts. Production from June to October, reports one central-Vermont grower. ②

A=1/16oz, $1.40 **B**=1/8oz, $2.00
C=1/2oz, $3.00 **D**=1oz, $5.00
E=4oz, $10.00 **K**=1lb, $28.00

3035BA Bali (55 days for bunching, 35–40 days baby leaf) Bali chard is a spectrum leap from traditional rhubarb chard even at baby stage—it's like putting little red lightning bolts in your salad mix. With a very dark lush green fully savoyed leaf, the veins and stalk contrast like fiery lava. Mouthfeel is juicy and succulent; flavor very mild. No odd bolting or wilting, no beet-rooted rejects or wiggly weird stems. Excellent regrowth for multiple harvests. This is red-chard perfection from Bejo Seeds. ④

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $5.00 **D**=1oz, $7.00
E=4oz, $14.00 **K**=1lb, $36.00

3036BL Bright Lights (56 days) A best seller and 1998 AAS winner from Johnny's Selected Seeds. Bright Lights bathes stems, midribs and secondary veins in a panoply of gold, yellow, orange, pink, intermediate pastels and dazzling stripes. The tenderness of its dark green to bronze leaves and the mildness of its chard flavor impresses all who try it. Young seedlings respond to cut-and-come-again culture, ideal for mesclun. Developed by John Eaton of Lower Hutt, New Zealand, who found the parent plants, red and yellow, in a small home garden in 1977 and crossed them to standard green and white varieties, selecting for color and flavor over the next fifteen years. Johnny's worked the following years to preserve the strength and range of the individual colors. ③

A=1/16oz, $1.90 **B**=1/8oz, $3.00 **C**=1/2oz, $4.50 **D**=1oz, $6.50
E=4oz, $20.00 **K**=1lb, $68.00

3038GO Golden OG (56 days) The gold standard in chard and a first-rate ornamental edible. A once rare color in chard, this strain from Frank Morton always stands out in our grow-outs for its taste as well as its color. Large light green semi-savoyed leaves contrast with the bright yellow stems and veins. Becomes strikingly luminescent as the plant matures. And the taste lacks the metallic qualities of some chard. This heirloom was developed in the 1830s when it was originally known as Chilean beet. ①

A=1/16oz, $2.10 **B**=1/8oz, $3.50 **C**=1/2oz, $6.00 **D**=1oz, $9.00
E=4oz, $30.00 **K**=1lb, $110.00

3041RO Red Rhubarb OG (59 days) Deep crimson stalks, dark green leaves. Very hardy. Beautiful for edible landscapes. Heirloom from Europe goes back to 1857. ⑤

A=1/16oz, $1.50 **B**=1/8oz, $2.20 **C**=1/2oz, $3.30 **D**=1oz, $5.00
E=4oz, $14.00 **K**=1lb, $50.00 **L**=5lb, $240.00

Salzer's 1915 catalog opines, "Swiss chard produces more food for the table than almost any other vegetable and it also requires less care; it yields a constant crop from July to winter."

CHICORY *Cichorium intybus*

~500-600 seeds/g.

Culture: Performs best in cool weather, spring or fall. Direct seed, thin to 1–2' apart.

3047RI Italiko Rosso (60 days) Savory Italian chicory often mistaken for a red dandelion. Nip off the deeply toothed red-veined leaves for a delectable treat. Ideal for braising, good in spicy mesclun, it imparts its mild dandelion flavor. Moderately tangy in cool weather, it can be somewhat bitter in summer's heat. ②

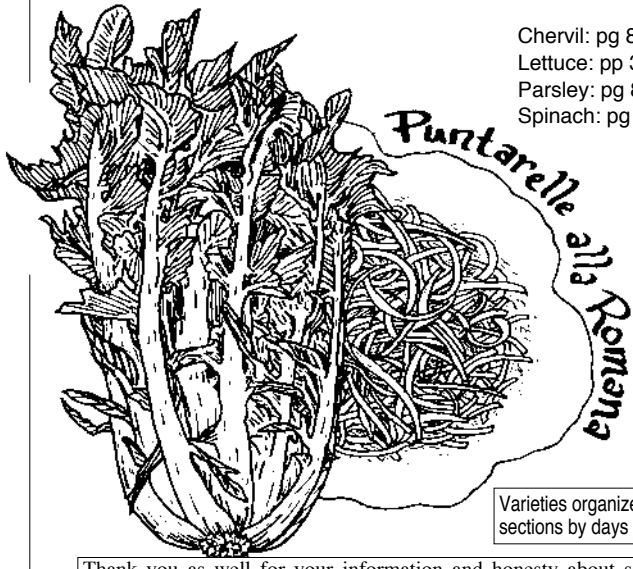
A=0.5g, $1.80 **B**=1g, $3.00 **C**=2g, $4.50 **D**=8g, $7.00
E=16g, $10.00 **K**=32g, $14.00

3048PZ Pan di Zucchero (80 days) The name means 'sugar loaf' in Italian. If you associate chicory with bitterness, heirloom Pan di Zucchero will surprise you. Beedy Parker enthused in late August: "The seed was extraordinarily vigorous so I put it out in any stray place in the spring and have been eating it for weeks now; the white inner core as romaine lettuce and the outer tough darker green leaves in stir fry.…resists weather extremes, drought in this case." Its 1' tall large tight light green leaves are shaped like a romaine lettuce crossed with a nappa cabbage. High yielding, best as a fall crop. Will store well for three months and survive for four if you wrap it tightly in slightly damp newspaper and keep it just above freezing. Lucie Arbuthnot compared it to witloof chicory, but without the extra work. ②

A=0.5g, $1.80 **B**=1g, $3.00
C=2g, $5.00 **D**=8g, $7.00
E=16g, $10.00 **K**=32g, $16.00

3049PT Puntarelle (80 days) I love the enthusiasm of gardeners who, upon hearing I work for Fedco, regale me with tales of their favorite vegetables. Last year I was thus introduced to one I had yet to encounter: Puntarelle, a chicory grown for its stems, which join together at the base to form a swollen bulb-like vegetable. The sweet hollow stalks, with texture akin to celery, are harvested when young and tender, then sliced lengthwise into spears and soaked in ice water, causing them to curl and become juicier. Make the salad called Puntarelle alla Romana by dressing them raw with anchovies, garlic, red wine and olive oil, which brings out their flavors: hints of arugula spiciness combined with fennel overtones. The frilly leaves can be stripped off and cooked separately, or the stems can be cooked as well and served with such traditional Italian fare as beans and pasta. Transplant or direct seed. Best grown in fall and harvested before frost. ②

A=1g, $1.90 **B**=2g, $3.00 **C**=4g, $5.00 **D**=16g, $12.00
E=32g, $20.00



Chervil: pg 80
Lettuce: pp 36-41
Parsley: pg 83
Spinach: pg 58

Varieties organized within sections by days to maturity.

Thank you as well for your information and honesty about seeds and how they grow — your passion about their wonders — and when warranted, warnings about possible difficulties and flaws.

May your gardens this year be pleasing or at least interesting.
– Ronnie Chirnoff, Ripton, VT

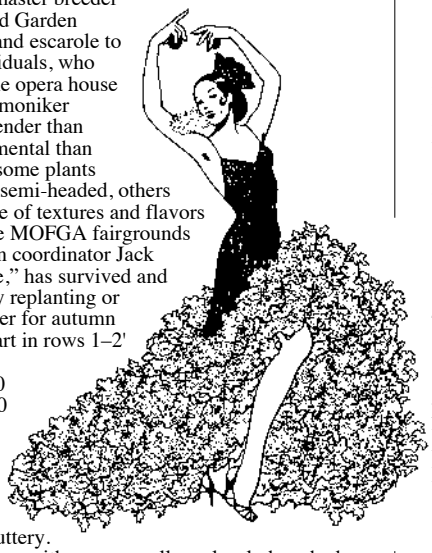
ENDIVE *Cichorium endivia*

~20,000-22,000 seeds/oz.

3063FO Très Fine Maraîchère Olesh OG (42 days) Anne Elder reported that TFM has changed her CSA members' minds about endive. "Wow, an endive that is sweet. Almost unheard of." Large frizzy endive with very fine ribs suitable for late spring and early summer harvests. Holds well in the field. Known to chefs as frisée. 19th-century French heirloom. ③

A=1/16oz, $2.90 **B**=1/8oz, $5.00 **C**=1/2oz, $16.00 **D**=1oz, $30.00

3075VO Speckled Friz Chickendiva OG (70-90 days) *C. intybus* x *C. endivia* Unusual chic greens from master breeder Frank Morton. Morton crossed Wild Garden chicories with frisée, curly endive and escarole to develop this colorful flock of individuals, who went from the swimming pool to the opera house when we learned that our previous moniker Chickendiv*e* was incorrect. More tender than chicory, more cold hardy and ornamental than endive. A variable gene-pool with some plants speckled, some plants open, others semi-headed, others with full heads. Enjoy a broad range of textures and flavors spiked with a hot peppery tang. The MOFGA fairgrounds patch of Chickendiva, which garden coordinator Jack Kertesz finds "cheery and attractive," has survived and self-sowed for 13 years without any replanting or much work. Sow in mid-late summer for autumn and winter production. Space 1' apart in rows 1–2' apart. Ω ①



A=1/16oz, $2.50 **B**=1/8oz, $4.20 **C**=1/2oz, $12.00 **D**=1oz, $22.00 **E**=4oz, $78.00

3092BL Full Heart Batavian (85 days) Also known as Escarole. Although very similar to Broad-Leaved, we liked this strain better for being a little more tender and buttery. Smooth broad dark green outer leaves with creamy yellow closely bunched center leaves that Fearing Burr described as thick and fleshy in his 1863 *Field and Garden Vegetables*. Lauded by William Woys Weaver as a good salad green, not bitter. Especially good as a fall crop; tolerates frost under row cover. Best cooked—one Italian tradition is to braise with white beans, also makes a savory escarole and leek pie. ②

A=1/16oz, $1.40 **B**=1/8oz, $2.10 **C**=1/2oz, $3.00 **D**=1oz, $4.00 **E**=4oz, $8.00 **K**=1lb, $20.00

RADICCHIO *Cichorium intybus*

~600-1000 seeds/g.

Culture: Culture like lettuce; do not allow to dry out. They are mature when heads form in the center. If you try direct-seeding, watch out for flea beetles. Fall crops make the largest heads. Very tolerant of fall frosts down to the 20s.

Seed not pelleted. **Days to maturity are from direct seeding.**

3187FR Fiero (66 days) F-1 hybrid. Beautiful elongated upright radicchio. Deeply ribbed leaves with a branching pattern; the whitish veins blush green along the margins and branches, creating a spectacular color contrast with the purplish background. Early and delicious, a reliable header. ④

A=0.05g, $3.00 **B**=0.1g, $4.25 **C**=0.2g, $8.00 **D**=0.4g, $13.00 **E**=1.6g, $40.00 **K**=3.2g, $75.00

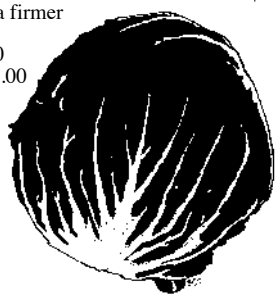
3188ND Indigo (69 days) F-1 hybrid. We've never seen a radicchio produce such consistently large tight heads of extraordinary rich interior color. Nikos rated it one of the sweetest red radicchios she's ever tasted. Tipburn resistant. ④

A=0.05g, $3.00 **B**=0.1g, $4.25 **C**=0.2g, $8.00 **D**=0.4g, $13.00 **E**=1.6g, $40.00 **K**=3.2g, $70.00

3189RT Radicchio di Treviso (80 days) Shaped almost like a small romaine lettuce, turns from green to variegated dark burgundy with lovely white veining as the nights grow cold. As its narrow leaves bunch like a romaine, you can bind them with a ribbon to make a firmer "head." Best for fall crops. ②

A=0.5g, $1.90 **B**=1g, $3.00 **C**=2g, $5.00 **D**=8g, $8.00 **E**=16g, $13.00 **K**=32g, $22.00

3190PR Palla di Fuoco Rossa (85 days) Round-headed Chioggia-type from Italy. Palla di Fuoco impressed us with its deep burgundy heads with good uniformity. Its name means 'ball of red fire.' ②



A=0.5g, $1.90 **B**=1g, $3.00 **C**=2g, $5.00 **D**=8g, $8.00 **E**=16g, $13.00 **K**=32g, $22.00

Wonderful in salads or braised, these radicchios are easy to raise from transplants although they have not yet been refined to absolute uniformity. Occasional plants still bolt unpredictably. The outer leaves are bitter; the edible centers are an acquired taste, retaining some bitterness. The folks at Adaptive Seeds suggest that steeping the leaves in ice water dissolves some of the bitterness.

SPECIALTY GREENS

AMARANTH *Amaranthus tricolor*

Amaranth was one of the Aztecs' five principal crops. They ground seeds into flour and prepared sauces with the leaves, rich in vitamins and minerals.

For grain amaranth see **p. 26**; for ornamental amaranth see **p. 85**.

4301RC Red Calaloo (120 days) Calaloo is a Caribbean stew that has many local variations, as does the name of the greens usually used in the dish, which also varies from island to island. This type is used in Jamaica, in the namesake dish as well as in many others. Although I have never been a fan of amaranth greens, considering them barely edible forage, the tricolor blaze on the tall upright Calaloo in August, more red than Hopi Red Dye, wowed me so I was induced to eat a bit. Double Wow! It was soft smooth easy eating—and that was raw, straight out of the field. Grow it as an ornamental and then eat it. Not all plants are red at the seedling stage, but they eventually turn. Prefers warm conditions. ~1250 seeds/g. ③

A=1g, $1.70 **B**=4g, $4.00 **C**=16g, $9.00 **D**=80g, $22.00

CLAYTONIA *Montia perfoliata*

~160 seeds/g. Direct seed in spring, **½"** apart. Thin to 3" apart. Responds to cut-and-come-again culture and tolerates moderate frosts. For best quality, make at least one succession planting.

3050CL Claytonia (40 days) Also known as **Winter Purslane** and **Miner's Lettuce**, it was the '49ers green of choice, rich in calcium and vitamin C. Claytonia's small heart-shaped leaves have a mild but succulent taste that we find attractive. We add it regularly to our mesclun. Barbara Damrosch says it "re-grows like crazy so you can get cut after cut off the same plant." ❄ ③

A=0.5g, $2.20 **B**=1g, $3.50 **C**=2g, $5.50 **D**=8g, $12.00 **E**=16g, $20.00 **K**=32g, $32.00

CRESS *Lepidium sativum*

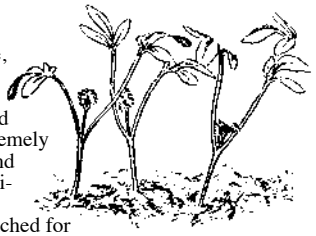
~9000-10,000 seeds/oz. Cress is great for quick spicy microgreens. Also called **Garden Cress** to distinguish it from Watercress.

3053CC Curly Cress (20 days) Bright green tightly ruffled leaves can be cut as soon as they are a couple of inches tall. Peppery flavor enlivens salads. Offered by C.P. Hirschy for a nickel a packet in 1890. ②④

A=1/16oz, $1.30 **B**=1/8oz, $2.00 **C**=1/2oz, $3.00 **D**=1oz, $4.00 **E**=4oz, $7.00 **K**=1lb, $18.00

3056WO Wrinkled Crinkled Crumpled Cress OG (30 days)

Salad green that will impress.
Mix some lettuce, add some dress.
Stir it up, sit down and fress.
Banish cares and summer stress.



With a designer's eye, a discerning palate, and a breeder's deft touch, Frank Morton crossed Persian and curled cresses to create a gene pool, from which he selected Wrinkled Crinkled. Broad leaves are extremely ruffled and wrinkled along the margins and savoyed in the middle. A fluffy spicy addition to your salad mix, imparting a tang, plus an irresistible sweetness. Can be bunched for market. Ω ①

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $6.00 **D**=1oz, $8.50 **E**=4oz, $22.00 **K**=1lb, $80.00

MÂCHE *Valerianella locusta*

~10,000-18,000 seeds/oz. Also known as Corn Salad, Lamb's Lettuce, Field Salad and Fetticus, mâche has a unique nutty flavor.

Culture: Mâche seed requires 10–14 days to germinate. Never start in soil temperatures above 68˚ as excessive warmth triggers seed dormancy.

3102VC Verte de Cambrai (45 days) A small-seeded small-leaved strain that performs especially well in cool or cold conditions and is the best kind for overwintering. Susan Coombs of Newton, MA, reported it happily growing in her garden in February. May be the same variety Thomas Jefferson grew in 1810 under the name Candia. ❄ ②

A=1/16oz, $1.60 **B**=1/8oz, $2.80 **C**=1/2oz, $4.00 **D**=1oz, $6.00 **E**=4oz, $16.00 **K**=1lb, $42.00

3114LL Large-Leaf Round (60 days) Vigorous large-leaf type is suitable for sowing in spring for an early summer harvest. Bryan O'Hara says "always a favorite in winter salads." Weaver traces this strain back to the 1840s, but for centuries prior to that corn salad was gathered in the wild. ②

A=1/16oz, $1.70 **B**=1/8oz, $2.50 **C**=1/2oz, $4.00 **D**=1oz, $5.00 **E**=4oz, $10.00 **K**=1lb, $28.00

Ω = Grown by a plant breeder. More information on p. 36. Complete symbol key on p. 5.

more Specialty Greens

NEW ZEALAND SPINACH *Tetragonia tetragonioides*

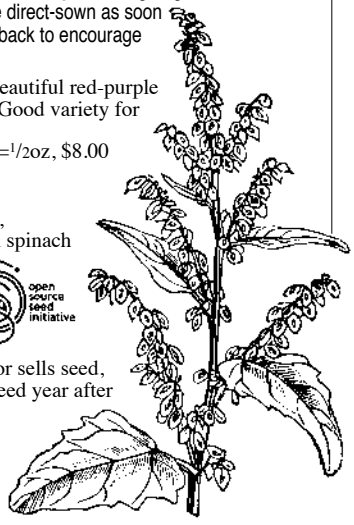
2592NZ New Zealand Spinach (52 days) Open-pollinated. Captain Cook's voyagers noted it in 1770 on the shores of Queen Charlotte's Sound in New Zealand. Doesn't look like a true spinach or taste like one, though some find it an acceptable substitute because it stands through the hot summer when true spinach bolts. Cooks have discovered it is a good green baked, especially in lasagna. Soak the nut-like seeds before sowing to speed and improve germination. Be patient and don't give up too soon. Only a few plants are needed to fill in your patch because Tetragonia sprawls. Irrigate frequently and pick often to keep the leaves tender and succulent and to avoid yellowing. Will withstand frosts to the low 20s. ~350 seeds/oz. ②

A=1/4oz, $1.70 **B**=1/2oz, $2.60 **C**=1oz, $4.50 **D**=4oz, $10.00 **E**=1lb, $20.00

ORACH *Atriplex hortensis*

~4000-7000 seeds/oz. Key salad ingredient once called the Cabbage of Love, also known as Mountain Spinach, popular in the 19th century then long forgotten.

Culture: Thrives in cool weather and should be direct-sown as soon as the ground can be worked. Can be pinched back to encourage production and retard bolting.



3148RO Purple Orach OG (38 days) Beautiful red-purple spinach-shaped leaves have a mild flavor. Good variety for microgreens, for salads, for cooking. ①

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $8.00 **D**=1oz, $14.00 **E**=4oz, $36.00

3150AO Aurora Orach Mix OG (38 days) In his Wild Garden Seed catalog, originator Frank Morton calls it "mountain spinach for merry pranksters." This mix of golden, dark purple, purple and carmine day-glo will give orach a whole new aura in your garden and salad mixes. As Morton says, "Exotic forms and high-contrast high-intensity color sells seed, and good taste and easy culture sells that seed year after year." Ω ①

A=1/16oz, $2.20 **B**=1/8oz, $3.80 **C**=1/2oz, $11.00 **D**=1oz, $20.00 **E**=4oz, $72.00

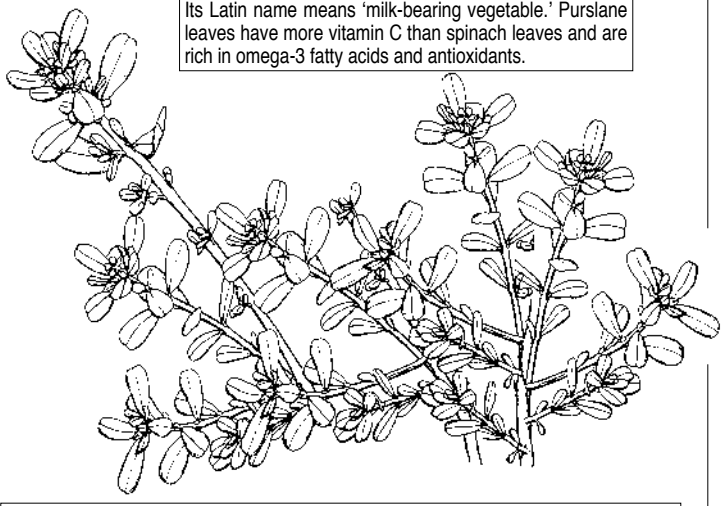
PURSLANE *Portulaca oleracea* var. *sativa*

Culture: Direct seed in spring, after danger of frost. Thin to 5" apart. Can be cut; will regenerate. We recommend a succession planting to maximize tenderness.

3182GO Golden OG (50 days) Its wild relative, the common garden weed, was a favorite edible of both Thoreau and Gandhi. This domesticated strain is more erect than the wilding, and not crawly. Golden has a succulent texture with a mildly acerbic flavor that makes it an ideal addition to salad mixes. Golden-green leaves patterned like a cross. ~2000 seeds/g. ①

A=0.5g, $2.10 **B**=1g, $3.50 **C**=2g, $5.00 **D**=8g, $10.00 **E**=16g, $17.00 **K**=32g, $31.00

Its Latin name means 'milk-bearing vegetable.' Purslane leaves have more vitamin C than spinach leaves and are rich in omega-3 fatty acids and antioxidants.



I'm so grateful for your existence—all that you do for the world of seed growing/sustainable/aware agriculture, as well as caring for humans. You all are good folks. Plus, the catalog is rad!
– Hillary J, Longview, WA

PERENNIAL GREENS

2590CM Caucasian Mountain Spinach ECO *Hablitzia tamnoides* Perennial, Zones 3-6. The surprise sensation of our 2015 catalog, Hablitzia's success motivated us to ramp up our perennial selection. Too new to have an agreed-upon common name, this plant has everything else. Originating in the Caucasus, it is a very hardy perennial, growing 6–9' long for 2–3 months in the very early spring when few other edible greens have surfaced. It's also tasty: both early shoots and subsequent leaves make a delicious and tender spinach-like vegetable without any bitterness. Moreover, it's beautiful, was originally introduced into Sweden around 1870 as an attractive vine to screen manor houses with its heart-shaped leaves. And, finally, though it is best grown in sun to maximize its productivity, it will also do well in its native habitat, the understory of temperate forests. Best germinated with stratification, and slow-growing in the first year. ~1,360 seeds/g. ①

A=0.1g, $2.70 **B**=0.2g, $4.60 **C**=0.4g, $7.00 **D**=1g, $11.00 **E**=4g, $40.00

3096KH Good King Henry *Chenopodium bonus-henricus* Perennial, Zone 3-9, also known as Lincolnshire Spinach. Used as a potherb, one of the first greens of spring and one of the last of fall. Harvest the dark green arrow-shaped leaves and use like spinach. Ancient plant used in festive meals, in meat dishes and as a side dish, very popular in Europe before it was supplanted by spinach. The name comes from *haganrich*, literally 'king of the hedge,' supposedly a goose-footed gremlin with that helps around the house. (I could use one of those!) Prefers rich soil in semi-shady areas, though will grow in full sun. Stratify seeds: fluctuation of high and low temperatures aids germination. Direct sow in spring or fall or transplant very young seedlings in spring. Once established the plants don't like transplanting. Requires a year of growth before plants can be harvested. Another name for this plant is Fat Hen, as stalks grow to 2 1/2' if left uncut, yielding a plethora of seeds beloved by chickens. ~160seeds/g. ①

A=0.5g, $2.10 **B**=1g, $3.30 **C**=2g, $5.00 **D**=8g, $13.00 **E**=16g, $22.00

3099SK Sea Kale *Crambe maritima* Perennial, probably Zone 5. Native to the seashores of England and Ireland and popular in Victorian England. Once grown on a large scale as a winter substitute for asparagus, cultivated for its blanched tender delicate ivory-colored leaf stalks that can be boiled or steamed to provide a good source of vitamin C. Sea Kale grows up to 3' forming a beautiful rosette of wavy-edged thick silvery-grey leaves and dense racemes of small white highly fragrant flowers in midsummer. Plants die back in the winter, the ideal time to take cuttings of the fleshy side-roots to store in moist sand until setting out in soil in March. This is a faster way to generate plants than starting each year from seed. Scarify seeds or nick the big seed casings for better germination. Start indoors like broccoli, set out, protect to overwinter and begin harvesting the 2nd and subsequent years. Blanch the tender slightly bitter early spring shoots in absolute darkness under large pots, and harvest when the stems reach 3–10". Exposed to light, in its natural state Sea Kale is bitter and inedible. After blanching, allow plants to rebuild their strength for the following season. ~35 seeds/g. ③

A=1g, $2.70 **B**=2g, $4.60 **C**=4g, $8.00 **D**=8g, $14.50 **E**=16g, $26.00

3192BL Broad-Leaved Sorrel (60 days) *Rumex acetosa* Perennial, Zone 3. Often known as Sour Grass. Likes cool weather, acid soil, partial shade and plenty of water to retard bolting. In spring it rapidly shoots up its thick sword-shaped lemony-flavored leaves. If left untouched will grow up to 18" and make seed stalks. Use for microgreens or snip the leaves while they are still young and tender. Keep cutting and never let them grow big and coarse or go to seed. If they get away, mow the plant close to the ground and it will regenerate. Or treat as a biennial by planting a new patch every year and rotating the old out of production. Young leaves add tang to soups and salads and provide a welcome spring tonic. Tony Ricci of Green Heron Farm in PA recommends grilling fish wrapped in sorrel leaves surrounded by foil to impart an herbal-lemon flavor to the fish. ~30,000 seeds/oz. ②

A=1/16oz, $1.70 **B**=1/8oz, $2.80 **C**=1/2oz, $4.00 **D**=1oz, $6.00 **E**=4oz, $15.00 **K**=1lb, $46.00

3059WO Watercress OG (60 days) *Nasturtium officinale* Perennial, Zone 4, native to Europe. Start seeds indoors and transplant to cold frame, keeping watered, or direct sow in soggy stream bank. Also good in pots. Likes sunshine. Keep picked; it gets bitter once flowers form. Its peppery taste enhances many a salad, soup and tea. Super-nutritious, it is high in vitamin C, calcium and iron. According to UConn researchers, contains a compound that inhibits numerous types of cancers. Since ancient China and Egypt, has had widespread culinary and medicinal uses. It is also a candidate for possible use in phyto-remediation or wastewater treatment operations. *Potentially invasive, and we cannot ship to CT or IL* where it is banned. In other warm moist locations, keep a close eye on plantings to prevent its unwanted spread. Its many uses perfectly illustrate the conundrum posed by potentially invasive plants: how do we find ways to control them and harness their many benefits instead of banning them? ②

A=1/16oz, $2.10 **B**=1/8oz, $3.60 **C**=1/2oz, $10.00 **D**=1oz, $16.00 **E**=4oz, $56.00

3195TR Turkish Rocket ECO *Bunias orientalis* Perennial, Zones 4-8. A few years ago, defeated by the resident flea beetle population. I gave up on growing brassicas in my garden. But when Aaron Parker brought Turkish Rocket seeds to the 2017 Seed Swap and Scionwood Exchange, I picked up a few anyway, tempted by the promise of direct-seeded perennial vegetables and by Aaron's reputation for growing cool plants. To my delight, the flea beetles turned up their noses at this new arrival, allowing ongoing harvest of tender spicy mustard greens and florets for stir-frying throughout the month of May. Larger leaves are harvestable through the growing season, with another flush of new growth starting in mid to late August. In the perennial garden, these plants stick up for themselves as attractive mounds of bright pointed leaves that shade out weeds. Drought-tolerant with a deep taproot that brings up moisture and minerals, this Rocket attracts beneficial insects and can be used as animal fodder. Considered invasive in some locales, this doesn't seem to be a problem in Maine. However, attentive deadheading will eliminate that possibility. Not for sale to Wisconsin. ① **NEW!**

A=1g, $3.60 **B**=4g, $12.00 **C**=14g, $32.00 **D**=28g, $55.00

Brassica spp.

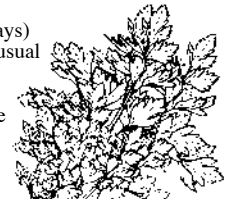
All Asian greens are open-pollinated except where noted.

Diseases: ALTS Alternaria Leaf Spot BSR Bacterial Soft Rot
BL Black Leg DM Downy Mildew
BR Black Rot

Note: Due to Black Leg quarantine issued by Oregon, we cannot ship Asian brassica greens packets larger than 1/2 oz (14g) into the Willamette Valley except those that have tested negative for Black Leg and Black Rot. Our information at press time is in the descriptions here; please check our website for updates.

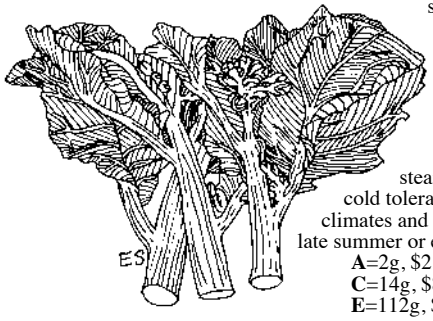
Days to maturity are from date of seeding. From transplants, subtract 20 days.

3203GS Garland Serrated Chrysanthemum (40 days) *C. coronarium* Grown for its aromatic greens with an unusual taste appreciated by devotees. This strain was superior to other Shungiku varieties in our trial. Its 3" flowers (buttercup yellow, edged in white with serrated tips) were larger and better for the edible flower market and its small grey-green serrated leaves had distinctly more chrysanthemum taste. It also makes a great yellow dye plant. The Japanese use it in hearty one-pot winter stews known as *oden*. Also good in salads, soups and stir-fries. Plant thickly in early spring (or summer for a fall crop) and harvest green leaves when stems are 4–8" tall, before buds appear. Sometimes self-sows. ~15,000 seeds/oz. ⑤



A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $4.50 **D**=1oz, $7.00
E=4oz, $20.00 **K**=1lb, $75.00

3204KL White Flowered Kailaan (45-60 days) *B. oleracea* F-1 hybrid. Also known as Chinese Broccoli, Chinese Kale or *Gai Lan*. Grown for its succulent stalks and leaves, it sends up tender 8" shoots topped with elegant little loose florettes. Once the main stalk is cut, it coppices into many secondary shoots. Has versatility and flavor similar to broccoli, excellent steamed or in stir-fries. Heat and cold tolerant, thrives in a wide range of climates and can be planted in late spring, late summer or early fall. ~250 seeds/g. ❄ ⑤



A=2g, $2.10 **B**=4g, $3.60
C=14g, $8.00 **D**=28g, $11.00
E=112g, $30.00 **K**=448g, $100.00

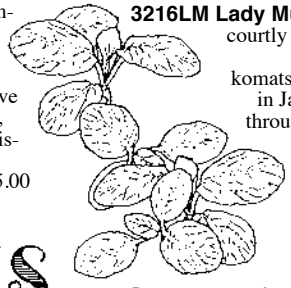
3205HT Hon Tsai Tai (37 days) *B. rapa* Chinese specialty vegetable also known as Purple-flowered *Choy Sum*, meaning 'vegetable heart' or 'flowering stem' in Cantonese. The flower stalks, leaf stalks and buds are deep purple, with color intensifying in cold weather. Grows vigorously in fertile soil, producing up to forty pencil-thick flowering shoots, though much skimpier on poor ground. Shoots and leaves have a pleasant mild mustardy flavor good for stir-fries, braising and soups. Also good for microgreens. Grows best in cool weather, ideal when sown in late summer for a fall crop or in fall for an early winter crop in warmer climates. Hardy to 23°. May bolt prematurely in midsummer heat. ~10,000 seeds/oz. ⑤

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $4.50 **D**=1oz, $7.00
E=4oz, $18.00 **K**=1lb, $55.00

We enjoy your seeds' consistently high germination rates and quality produce. Our tiny farm stand has made enough in three years to buy a new freezer thanks to your fine products.
– Susan Sutheimer, Poultney, VT

3209MS Maruba Santoh (35 days) *B. r.* (pekinensis group) With Maruba you get four vegetables in one. The loose round vibrant chartreuse leaves provide a mild piquant mustardy flavor while the flat white stems impart a juicy crisp pac choi taste. High-end chefs like to use the blossoms. Market grower Scott Howell finds the flavor more subtle and complex than that of other greens and cuts Maruba small for his mesclun. Fairly bolt tolerant, so plant after the early spring flea beetle invasion subsides. ~8,000 seeds/oz. ⑤

A=1/16oz, $1.60 **B**=1/8oz, $2.80 **C**=1/2oz, $4.00 **D**=1oz, $6.00
E=4oz, $14.00 **K**=1lb, $44.00



3216LM Lady Murasaki Komatsuna (45 days) *B. r.* Lady Murasaki, the courtly author of *The Tale of Genji*, considered one of the world's first and finest novels, is an apt namesake for this elegant komatsuna (Japanese mustard spinach). *Murasaki* means 'purple' in Japanese—and this variety is so very purple that it lured me through a field of about three dozen other kinds of greens to get a closer look. The slow-growing 8–10" deep purple rounded leaves stand as beautifully as a lady-in-waiting, without bolting, and are mild and delectable all the way through the season. ~8000 seeds/oz. ⑤

A=1/16oz, $2.10 **B**=1/8oz, $3.60 **C**=1/2oz, $9.00
D=1oz, $13.00 **E**=4oz, $44.00 **K**=1lb, $140.00

3218SP Senposai (40 days) F-1 hybrid. Developed in Japan, a cross between komatsuna (Japanese mustard spinach) and regular cabbage. "Customers buy it once because it looks absolutely stunning, then they buy it again because it is extremely delicious. Absurdly productive and easy to grow," raves John Eisenstein of Port Royal, PA. Round medium-green leaves are wonderful in *okonomiyaki* or for braising. A spring sowing will stand the entire summer (even through drought) and well into fall before bolting. Can be overwintered in warmer climes or used for spring greenhouse salad production because it grows so rapidly. Open plant habit requires 12–18" spacing. ~6500 seeds/oz. ❄ ⑤

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $5.00 **D**=1oz, $9.00
E=4oz, $24.00 **K**=1lb, $80.00

Tatsoi (45 days) *B. r.* (narinosa group) What grows quickly, can be seeded as late as August, withstands frost and is, according to *Orlando Sentinel* columnist Sherry Boas, "just as versatile as spinach"? Yes, Tatsoi, also known as Tah Tsai. Anne Elder has picked it all fall into December even after a snow melt. Remains sweet and unburnt by cold during mild winters. "A dream come true for snow-dwelling beings craving greens." Spoon-shaped thick dark green leaves make beautiful compact rosettes with mild brassica flavor. Make great microgreens. Also good in place of lettuce in sandwiches, stir-fried, in quiche, lasagna or soup. Will come back when cut. An essential ingredient in our salads and mesclun. ~13,600 seeds/oz. ❄

3220TS Tatsoi Tested negative for BR and BL. ⑤

A=1/16oz, $1.90 **B**=1/8oz, $3.00 **C**=1/2oz, $4.60 **D**=1oz, $7.00
E=4oz, $15.00 **K**=1lb, $56.00 **L**=5lb, $260.00

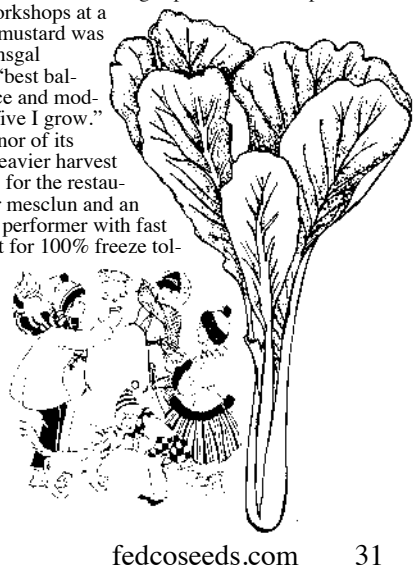
3221TO Tatsoi OG ①

A=1/16oz, $1.90 **B**=1/8oz, $3.30 **C**=1/2oz, $5.50 **D**=1oz, $8.00
E=4oz, $25.00 **K**=1lb, $90.00

3223YN Yokatta-Na (21 days baby; 45 days mature) *B. r.* (narinosa group) F-1 hybrid. "What a surprise! The heads grow well larger than a foot tall and we ate the 2nd growth heads whole like young bok choy," reported the Wolperts in Belington, WV. Quick-growing and versatile, tolerating both heat and cold, Yokatta can extend your season at either end, while simultaneously broadening your culinary range. Use it either raw in salad mixes or cooked in stir-fries. The deep green tender leaves, though flavorful, lack the mustard "bite" found in so many Asian greens and can be harvested as a cut-and-come-again crop or at maturity. ④

A=1/16oz, $2.00 **B**=1/8oz, $3.50 **C**=1/2oz, $6.00 **D**=1oz, $10.00
E=4oz, $28.00

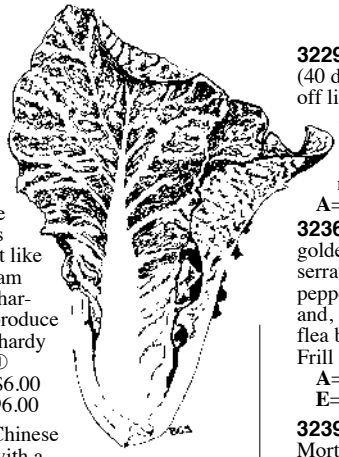
3257CO Chinese Thick-Stem OG (47 days mesclun; 62 days full size) *B. juncea*. When farmer-breeder Brett Grohsgal passed out samples of his winter-hardy greens at two workshops at a PASA conference, this green mustard was the hands-down favorite. Grohsgal believes this mustard has the "best balance between sweet succulence and moderate pungency of any of the five I grow." He called it Thick-Stem in honor of its enlarged midribs that give a heavier harvest for the farmer and better mass for the restaurant or home chef. Terrific for mesclun and an excellent cut-and-come-again performer with fast regrowth. Grohsgal has bred it for 100% freeze tolerance in Maryland; it survived our overwinter test in Maine. Needs good soil fertility, prefers clay or loam to sand, dislikes drought but can take wet. **BR** ❄ ①



A=1/16oz, $2.00
B=1/8oz, $3.50
C=1/2oz, $12.00
D=1oz, $20.00
E=4oz, $52.00

CHINESE CABBAGE *B. rapa*

~7000–9000 seeds/oz.



3222BO Tokyo Bekana OG (20 days baby, 45 days full size) These baby Chinese cabbages may be bunched for market or their ruffled curled leaves cut to add loft and weight to salad mixes. With pale green color and lettucy leaves they look almost like lettuce. Bekana will regrow for multiple cuttings and branch out, giving lots of edible leaves with very little coarse stalk. Lacy, mild, sweet, a bit like lettuce but never bitter and makes a good slaw. Adam Tomash seeded his on July 6 for a late Aug.–Sept. harvest. It could be sowed later and, with protection, produce into late fall. But Bryan O'Hara says not as winter hardy as mizuna or tatsoi. Thin to 4–6" for full "heads." ①

A=1/16oz, $1.90 **B**=1/8oz, $3.30 **C**=1/2oz, $6.00 **D**=1oz, $10.00 **E**=4oz, $26.00 **K**=1lb, $96.00

3224FJ Fun Jen (45 days) A good lettucy-type Chinese cabbage featuring fast-growing undulating leaves with a slightly wrinkly surface. Semi-loose conical very light yellow-green ruffled 6x10" heads of crunchy texture and very mild delicate flavor somewhat like lettuce. The thick white ribs are tasty with a pleasing light tangy sweetness. Excellent frost resistance but will bolt in heat after standing 2–4 weeks. Stores very well. ③

A=1/16oz, $1.70 **B**=1/8oz, $2.70 **C**=1/2oz, $5.00 **D**=1oz, $6.00 **E**=4oz, $13.00 **K**=1lb, $40.00

3225BL Blues (52 days) F-1 hybrid. Good bolt resistance, disease resistance and taste in this nappa type. Flavor is relatively pungent, great in kimchi. Suitable for planting early spring through July. Tested negative for BR and BL. Moderate tolerance to virus, DM, ALTS, BSR. ⑤

A=1/16oz, $3.10 **B**=1/8oz, $5.60 **C**=1/2oz, $21.00 **D**=1oz, $38.00 **E**=4oz, $140.00

MUSTARDS

~10,000-50,000 seeds per oz, with wide variability among varieties. Versatile for tasty microgreens. Mustards are potent soil fumigants. Incorporating the residues of mustard crops into your soil can reduce fungal diseases in your succession crop. See **8070** Mustard in the Farm Seed section for mustard as a cover crop.

Note: We cannot ship packets larger than 1/2 oz (14g) of Mizuna and other mustards into Oregon's Willamette Valley except those that have tested negative for Black Leg and Black Rot.

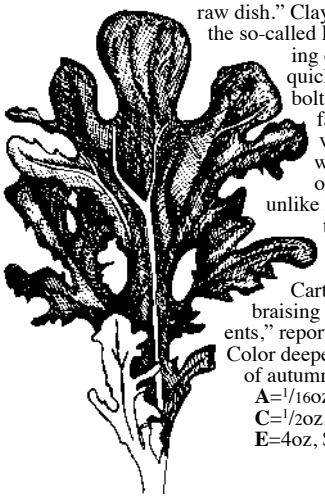
3217GG Garnet Giant (20 days baby; 45 days mature) *B. juncea* Despite its name, this mustard is a favorite for cutting at its dark purple baby stage. At its giant 3' form, plants rival the best of fall color with sun shining off vibrant maroon slightly toothed leaves on gangly lime green stems with yellow bolting flowers—the effect was glorious in our trial garden. The sweet spicy leaves, stems and flowers were all equally tender and delicious, whether grazed or braised. ⑤

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $4.00 **D**=1oz, $6.00 **E**=4oz, $16.00 **K**=1lb, $60.00

3226MO Early Mizuna OG (40 days) *B. rapa* (japonica group) Recommended for northland salad enthusiasts, this vigorous heirloom Japanese mustard produces slender white stalks with deeply cut and fringed dark green leaves, not at all pungent. One planting could suffice for full-season production if watered in dry spells and kept cut, though a few will bolt in September. Many folks will prefer to make three or more succession plantings because the young leaves are the most tender. Biennial. Essential in mild mesclun and great for microgreens. Tested negative for BR and BL. ⑤

A=1/16oz, $1.60 **B**=1/8oz, $2.80 **C**=1/2oz, $4.60 **D**=1oz, $7.00 **E**=4oz, $18.00 **K**=1lb, $56.00 **L**=5lb, $250.00

3227RO Ruby Streaks OG (40 days) *B. j.* As if an artist had carefully brushed deep purple filigree on the delicately serrated leaves of mizuna. Anne Elder describes it as "a sweet flash of color for any raw dish." Clayton Carter calls it "everything that the so-called Purple Mizuna should be." Bold coloring on deeply toothed leaves. Germinates quickly, grows speedily but, unlike Mizuna, bolts rapidly. Great for multiple spring and fall cuttings, but cannot stand heat. Provides a striking contrast when bunched with **3226** Mizuna, **3222** Tokyo Bekana or **3209** (p. 31) Maruba Santoh. Also unlike Mizuna, has a sweet and spicy flavor, though not excessively hot. Even after it bolts, its flower buds and yellow flowers can add a tang to salads. Carter calls it "the staple of my salad and braising mixes." "A big hit with my chef clients," reports Georgie Smith of Coupeville, WA. Color deepens toward darker maroon in the cool of autumn. ①



A=1/16oz, $2.20 **B**=1/8oz, $3.50 **C**=1/2oz, $6.00 **D**=1oz, $9.00 **E**=4oz, $22.00 **K**=1lb, $80.00

3229MO Mizspoona Salad Selects Gene Pool OG (40 days) *B. r.* Hits the palate just right: doesn't bite the tongue off like some of the serious mustards, nor bore with blandness. Sweet, juicy with a bit of zing, medium-dark green variable leaves, some rounded, some pointed, slightly ribbed white veins. Tender and delicious in salads or braised. From Frank Morton. Tested negative for BR and BL. Ω ①

A=1/16oz, $2.10 **B**=1/8oz, $3.50 **C**=1/2oz, $8.00

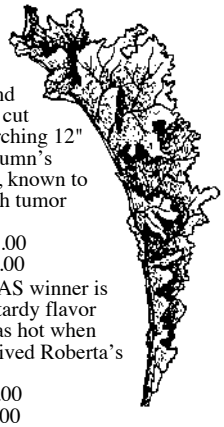
3236GO Golden Frill OG (20 days baby, 40 days mature) *B. j.* Light golden-green leaves curl and furl, adding flounce to your salad mix. Intricate serration of foliage seems almost laser cut. Its mustard flavor gives an acute peppery zing. Grows quickly for use as a baby green throughout the year and, at sauté size, resists bolting in the summer heat. Lacy texture tolerant to flea beetle damage. Rising Up Farm, in Belfast, ME, always includes Golden Frill in their salad mix. ① ❄

A=1/16oz, $2.10 **B**=1/8oz, $3.60 **C**=1/2oz, $6.00 **D**=1oz, $10.00 **E**=4oz, $32.00 **K**=1lb, $90.00

3239LO Pink Lettucy Mustard Gene Pool OG (40 days) *B. r.* Frank Morton selected well-mixed breeding pools for disease resistance and particularly for pink and purple pigmentations on the midribs. Lots of variation remains in leaf color (from light green to green with purple edges), in indentations of the leaf edges and some in midrib coloration. Morton continues to select from the pool for specific types and you can, too. He is particularly interested in creating more color for baby cut salad mixes. Commercial operations will find a wealth of good cutting, home gardeners terrific salad fixings mild but with just enough tang to keep you interested. Survived Roberta's overwintering trial. Tested negative for BR and BL. ❄ Ω ①

A=1/16oz, $2.10 **B**=1/8oz, $3.50 **C**=1/2oz, $8.00 **D**=1oz, $13.00 **E**=4oz, $44.00 **K**=1lb, $136.00

3241SG Spicy Green (21 days baby, 41 days mature) *B. j.* Mild yet snappy, Spicy Green out-tasted 12 contenders in its class of finely lobed wasabi-flavored mustard greens. Beautiful, vibrant and viridescent, it grows to 4 1/2" in just 21 days, ideal for cut baby greens. Develops into an elegantly furled and arching 12" long sauté leaf, withstanding summer's highs and autumn's lows with equal finesse. Packed with isothiocyanates, known to neutralize cancer-causing chemicals and interfere with tumor growth. ❄ ⑤

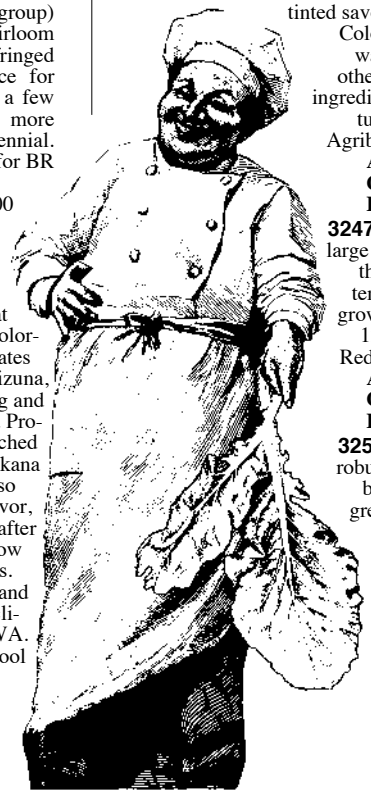


A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $5.00 **D**=1oz, $8.00 **E**=4oz, $20.00 **K**=1lb, $60.00

3243GW Green Wave (45 days) *B. j.* This 1957 AAS winner is the best-adapted mustard for our climate. Its hot mustardy flavor makes it a prime ingredient in piquant mesclun. Not as hot when cooked. Will come back when cut; slow to bolt. Survived Roberta's overwintering trial. ❄ ②

A=1/16oz, $1.40 **B**=1/8oz, $2.00 **C**=1/2oz, $3.00 **D**=1oz, $5.00 **E**=4oz, $9.00 **K**=1lb, $23.00

3245RO Red Giant OG (45 days) *B. j.* (integlifolia group) Large purple-tinted savoyed leaves make the 18" plants very decorative. Color intensifies in cooler temperatures, as spiciness wanes. Tastes like horseradish to some, peppery to others. This heirloom Japanese mustard is a standard ingredient in spicy mesclun. Survived outdoor temperatures down to 18˚ when double-covered with **8874** Agribon 19. ❄ ③



A=1/16oz, $1.70 **B**=1/8oz, $2.90 **C**=1/2oz, $4.50 **D**=1oz, $7.00 **E**=4oz, $16.00 **K**=1lb, $50.00

3247PO Osaka Purple OG (45 days) *B. j.* Striking large purple-streaked green foliage with a zesty flavor that leaves a lingering tingle on the tongue. As the temperatures grow hotter, so do the leaves. A rapid grower, but more compact than Red Giant, mature at 12–14". Broad stems are also succulent. Used like Red Giant for mesclun and braising. ②③

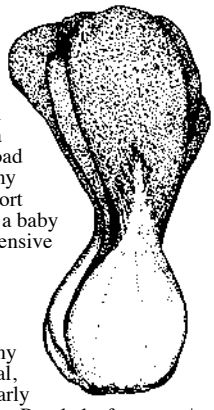
A=1/16oz, $1.90 **B**=1/8oz, $3.20 **C**=1/2oz, $5.00 **D**=1oz, $9.00 **E**=4oz, $27.00 **K**=1lb, $90.00

3253ZO Toraziroh OG (45 days) *B. alboglabra* A robust performer with just the right kind of mustardy bite. Rapidly develops prolific yields of very dark green large leaves distinctively but not overwhelmingly pungent. Has won many favorable reviews from brassica lovers. Stems, also edible, have a flavor somewhat like pac choi. Relatively slow to bolt. ①

A=1/16oz, $1.90 **B**=1/8oz, $3.30 **C**=1/2oz, $6.00 **D**=1oz, $9.00 **E**=4oz, $28.00

People and environment over profit... Thank you!
– Alonso Mata, Santa Rosa, CA

PAC CHOI *B. r.* (chinensis group)

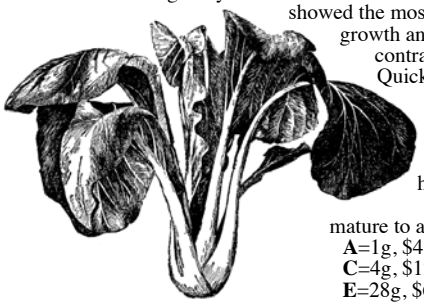


~10,000–14,000 seeds/oz. 1 g packet sows 18 ft; 1/16 oz packet sows 30 ft. Also known as Bok Choy. Pac Choi is a good crop for microgreens.

3260SH Shuko (45 days) F-1 hybrid. Baby pac choi with green stems likes cool temperatures but resists bolting for a long time, even in heat. Vase-shaped 6–12" plants have broad green petioles with beautiful dark leaves. Tender and creamy when steamed or stir-fried. John Eisenstein who farms in Port Royal, PA, reported that Shuko "performed much better as a baby harvest than any other I've tried, including much more expensive ones.…Quite cold hardy as well." ⑤

A=1/16oz, $1.80 **B**=1/8oz, $3.00 **C**=1/2oz, $5.50
D=1oz, $8.00 **E**=4oz, $22.00 **K**=1lb, $70.00

3264PP Purple (48 days) F-1 hybrid. Adds versatility to mixes and salad. This new color in pac choi debuted in many 2009 seed catalogs. My favorite of several strains in the trial, showed the most vigorous early growth and darkest hue. Purple leaf tops contrast with green veins and stems. Quick growers; harvest them within three weeks as 4–6" baby-leaf greens, their best spring use. For fall crops you may allow them to grow 8–10" full-sized heads. Along the way they lose some of their deep color and mature to a greenish purple. ③

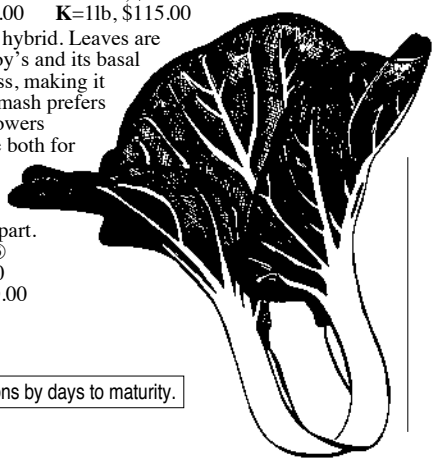


A=1g, $4.00 **B**=2g, $7.00
C=4g, $12.00 **D**=14g, $35.00
E=28g, $65.00

3270PO Prize Choy OG (50 days) Classy open-pollinated pac choi with celery-like white stems and vase-shaped 15–18" tall heads, like two vegetables in one with succulent stems and tender greens. Good for kimchi or stir-fries. ①

A=1/16oz, $2.00 **B**=1/8oz, $3.50 **C**=1/2oz, $5.50
D=1oz, $10.00 **E**=4oz, $36.00 **K**=1lb, $115.00

3273JC Joi Choi (50 days) F-1 hybrid. Leaves are much darker green than Prize Choy's and its basal stem is almost double the thickness, making it so succulent that trialer Adam Tomash prefers it to all other varieties. Market growers appreciate its uniformity. Suitable both for summer and fall crops, though much less likely to bolt in the fall. Do not disturb the roots when transplanting and space 1' apart. Tested negative for BR and BL. ⑤



A=1g, $3.00 **B**=2g, $5.20
C=4g, $8.00 **D**=14g, $20.00
E=28g, $38.00

Varieties organized within sections by days to maturity.

RADISHES for leaf & pod

Raphanus sativus

"Regular" radishes for roots on pages 56-57.

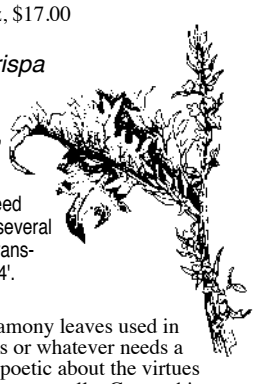
2263SS Saisai Leaf Radish (35 days) F-1 hybrid. An Asian radish developed primarily to provide leaves for salads, stir-fries and pickling. Harvest the juicy pale green succulent leaves when they are young and tender. Quick growing and slow to bolt. Plants can be densely sown if grown only for their leaves. Can be allowed to grow full-sized daikon roots for a dual use. The roots are shorter, plumper and milder than most daikons, with a texture that pleased Clayton Carter of Fail Better Farm. They will keep all winter in the root cellar. ⑤

A=1/8oz, $1.80 **B**=1/2oz, $5.00 **C**=1oz, $8.00 **D**=4oz, $24.00

2264RT Rat-tail Radish (50 days) Open-pollinated. Grown for its tangy seed pods, not its roots. William Woys Weaver called it "the Don Juan of radishes" because it so readily crosses with all others. Introduced from Japan in 1866-67 by Gregory. Attracts butterflies and other pollinators, worth growing even if you don't want to consume its pungent pods. Because these often grow as long as rat's tails and almost as fibrous, garden writer Barbara Damrosch advises harvesting them at "skinny bean size like a French filet bean" for maximum tenderness. The immature purplish-green pods are a delicacy in India and Asia, adding a mustardy zing to salads, stir-fries and other dishes. When exposed to vinegar the purple pods turn a brilliant green that will bleed into a pickling brine and enhance the color of cucumber pickles. Radish plants will grow to 5' and branch out as they set seed, so give them plenty of room. Stake or trellis them for ease of picking; tomato cages work well. Your objective is not a small root, but a generous supply of pods. ✿ ①

A=1/8oz, $3.20 **B**=1/2oz, $9.50 **C**=1oz, $17.00

SHISO *Perilla frutescens* var. *crispa*



~500–800 seeds/g. Both green and red shiso are highly aromatic and ornamental with frilly serrated leaves. Popular in Japan, the seeds, sprouts, leaves, buds and flowers are all used in cuisine. The seeds are part of Japan's famous seven-spice mix.

Culture: To break dormancy, freeze and thaw the seed several times over a 21–45 day period. Soak seeds several days or until they sprout. Move to indoor flats, then transplant into warm moist well-drained soil. Grows up to 4'. Absolutely intolerant of frost.

3282GP Kaori Green Shiso (85 days) Cinnamony leaves used in sushi and to garnish rice, noodles, soups, pickles or whatever needs a kick of flavor. Think cocktails! A friend waxes poetic about the virtues of shiso: it's like biting into how a fragrant flower smells. Green shiso was not widely used in Japan until the 1960s. ③

A=1g, $2.40 **B**=4g, $5.50 **C**=12g, $12.00 **D**=36g, $34.00

3283RS Red Shiso (85 days) Introduced to the U.S. in the 1850s from Japan where it's been prized since the 8th century. Purplish-red anise-scented sharp-flavored leaves are used in sushi, sauces, garnishes, pickles and stir-fries. Used to color umeboshi and other pickles red. Also known as *zi su*, a specific in Chinese medicine for seafood poisoning. Louise Weber of Greenwich, CT, asserts that deer won't touch it and plants it around their favorite crops. ③

A=1g, $2.30 **B**=4g, $5.00 **C**=12g, $10.00 **D**=36g, $25.00

Gleanings from our Seed Growers (part 3)

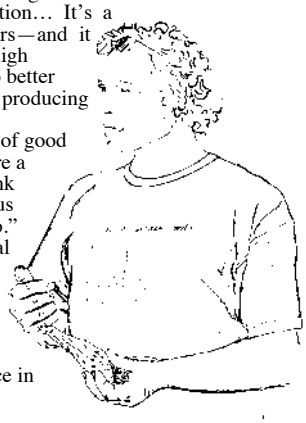
Frank Morton of Shoulder-to-Shoulder Farm in Oregon, is a natural gardener. He intentionally planted his first seed at age 5, when he made the connection that a watermelon seed would make another watermelon. And he liked watermelon.That first seed did sprout, though too late in the season, so there were no watermelon in his immediate future. But another seed did bear fruit: the premonition that seed is the source of riches, providing you with what would otherwise be costly. "I knew that the way to have what I needed in life was to be a farmer and then I can do whatever I want."

The next seed got planted by the legendary John Jeavon's book *How to Grow More Vegetables Than You Ever Thought Possible on Less Land Than You Can Imagine*. "I got the book and devoured it—and suddenly I knew what I was going to do." Several years and a couple farms later, having worked 1.5" of steel off a digging tine in the creation of a salad business that marketed to top tier chefs, it was time for more permanent roots.

Introducing chefs to strange salad greens was cutting edge at the time. But Frank started to see more strangeness in the lettuce that inadvertently crossed in his field, and he understood that this is where variety comes from. "People want what they've never seen, so I went looking for crosses—the lightbulb went on—all this is useful because it's something chefs have not yet seen. So I started saving my own seed. And I thought if I could do this for 20 years I could have a company of my own seeds." It took 10. In 1994, the house was so stuffed with seed that his wife Karen said, "You have to start a seed business or you can't save more seed." Wild Garden Seed sprang to life, which makes it sound quick and easy, which it was not. They spent all their savings. They learned about seed cleaning and intercropping. They worked hard. As Karen said, "There was no plan B." [See Karen's profile, page 56.]

All this time they lived very rurally and off the grid. Frank credits this as an integral factor in his creativity during this "golden age" of breeding. Living with power, closer to town, "there is too much noise, too much distraction, too many people dropping in." He is not a morning person and has always worked best in the quiet of the evening, at the end of the day.

"I grow seed because seed is primary," he said. "Without improved seed you have nothing. It's essential, and I can do all aspects, and at a scale where I am pertinent to the next generation. Growing seeds is a creative act: seeds are responsive…to environment, to selection… It's a creative act that you can pursue for years—and it takes years. It allows you to be a steward, high minded, farming by philosophy. There's no better blessing than to have meaningful work and producing seeds is meaningful work."



Asked for advice, he said: "There's a lot of good energy in the seed world right now. If I were a young vegetable guy I would definitely think there was a position on the farm for a serious seed guy. It's a complementary relationship."

And then: "I didn't intend to be a political activist but those who control the seeds control the food system. That's a very big deal. The grassroots has to be interested in seeds or we lose our independence. And that resonates with people. We should be self-reliant in some respect, and self-reliance in seed is something we can do."

KALE & COLLARDS

~175–280 seeds/g. ~4200–9800 seeds/oz;
Culture: Important crop in colder climates owing to its natural resistance to frost, kale is sweeter after exposure to cold. To enjoy it at its best and to avoid the worst of the flea beetle season, direct seed in July or August for late-season maturity. Excellent for microgreens.

See page 13 for disease abbreviations and pest remedies.

Days to maturity are from date of seeding.

KALE MIX

3469KM Kale Mix (60-65 days) With the surge of interest in kale, this has become our most popular mix, sales exceeding 2,400 packets each of the past four years. If it's hard to pick just one or two kale varieties from so many tempting choices, here's the solution: enjoy the whole medley of diverse colors, patterns and shapes from one packet. ①②③④
A=2g, $2.20 **B**=4g, $3.80 **C**=14g, $9.00 **D**=28g, $16.00
E=112g, $55.00

Curly Leaf Kale *Brassica oleracea* (acephala group)

3449KO Scarlet OG (30 days baby, 55 days mature) Open-pollinated. Redbor has been hard to obtain in recent years so we debuted this good substitute on our website three years ago. It is comparable to Redbor in plant height, leaf shape and color. Suitable for baby leaf or bunching. Enjoy its frilly purple leaves. ❄ ③
A=2g, $2.10 **B**=4g, $3.20
C=14g, $9.00 **D**=28g, $16.00
E=112g, $56.00

3450VO Dwarf Blue Scotch Curled OG (30 days baby, 56 days mature) Open-pollinated. Also known as Vates. The most commonly grown kale variety, introduced in 1950 by Vates (see **3441** Collards, next page) out of the pre-1865 heirloom Dwarf Green Curled. Dense frilly finely curled blue-green leaves on compact upright 12–16" plants stand well, maintain color and resist yellowing in cold and heat. Hardy and productive. Best as a fall crop, planted in July or early August. More variable than the hybrids. ❄ ③
A=2g, $1.90 **B**=4g, $3.00
C=14g, $5.00 **D**=28g, $8.00
E=112g, $18.00 **K**=448g, $55.00

Beedy's Camden OG (60 days) *No crop this year*. We hope to have back in 2020.

3452RB Redbor (60 days) F-1 hybrid. A spectacular all-red kale, highest rated in the OSU trials. Frilly ruffled leaves take on dramatic purple color in cool weather. A superb ornamental edible, gorgeous enough to make a terrific flower border or edge plant. Can be grown in summer but really comes into its own in fall. Quite cold hardy. Grows to 3'. For a rainbow-kale patch, interplant with White Russian, Red Russian, Winterbor and Nero di Tuscana. Much less susceptible to flea beetles than Red Russian kale. Tested negative for BR and BL. ❄ ④
A=0.5g, $6.00 **B**=1g, $10.00 **C**=4g, $32.00
D=14g, $105.00 **E**=28g, $200.00

3453WB Winterbor (60 days) F-1 hybrid. Highly sought-after kale beloved by commercial growers and home gardeners alike, crinkly Winterbor was the most vigorous grower in each of our last three kale trials, showing the best cold hardiness and the richest blue-green color. Curled leaves are highly ruffled with good mild flavor, especially after they've been tickled by some of our frigid November nights. 14–16" tall. Tested negative for BR and BL. ❄ ④
A=0.5g, $2.90 **B**=1g, $5.00 **C**=4g, $13.00
D=14g, $40.00 **E**=28g, $70.00

3457LO Rainbow Lacinato OG (61 days) Open-pollinated. Who but Frank Morton would think to cross **3467** Lacinato with **3452** Redbor? The result? A spectacular kale that combines some of the best features of both. Curly edges, red veins, purple leaves, blue-green leaves, what a banquet of diverse shapes and colors. Lacinato lends deepened background color to Redbor's productivity, super cold-hardiness and reluctance to bolt. A heavenly combination. Tested negative for BR and BL. Ω ❄ ①
A=2g, $2.30 **B**=4g, $4.00 **C**=14g, $9.00 **D**=28g, $12.00
E=112g, $40.00

3458TO Baltisk Rod Purpurkal OG (63 days) Open-pollinated. In 2008 we selected this extraordinary kale to add to our seed productions after our first sight of it. We had never seen a kale this beautiful and we haven't since, I can't find words to describe the deep psychedelic dark green and purple-red shades these frilly curled leaves take on as the autumnal chill deepens, but trialer Donna Dyrek is succinct: "Very very curly. Very red. Extremely hardy." Its flavor is mild, its feathery texture pleasantly chewy with a nice slow sweet aftertaste. An incomparable ornamental edible! Our current grower is selecting for cold-hardiness. Originally from the Baltic; one of Redbor's parents. We thank our friends at Runabergs Froer in Sweden for giving us the original seed. *Supply limited*. ❄ ①
A=1g, $2.00 **B**=4g, $6.00

3459DB Darkibor (65 days) F-1 hybrid. A top-quality Dutch variety with very dark green, triple-curled richly textured leaves. Crinkly and very curly. The uniform 18–20" tall plants hold well in the field in all weather conditions and continue to grow. Excellent for successive harvesting, Darkibor has comparable cold hardiness to Winterbor and holds its own in taste tests. Tested negative for BR and BL. ❄ ④
A=0.5g, $3.00 **B**=1g, $5.00 **C**=4g, $13.00 **D**=14g, $42.00
E=28g, $75.00

Dinosaur Kale *B. o.* (acephala group)

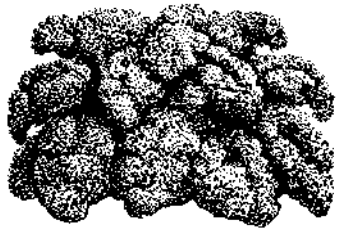
3465DO Dazzling Blue OG (60 days) What fun! Vigorous 24–34" upright savoyed lacinato-leaved kale in a range of bluish-green shades and all with a dramatic pink mid-rib. Sure to attract attention of chefs, market growers and gardeners alike. Good flavor and selected for cold hardiness, the color intensifies in cool weather. All the result of the breeding inspiration of Hank Keogh to back-cross Rainbow Lacinato with its Lacinato predecessor. Bred for organic conditions, grown by Wild Garden Seeds and released through OSSI. You, too, will be dazzled. Tested negative for BR and BL. Ω ① **NEW!**
A=2g, $2.50 **B**=4g, $4.20 **C**=14g, $12.00 **D**=28g, $20.00
E=112g, $60.00

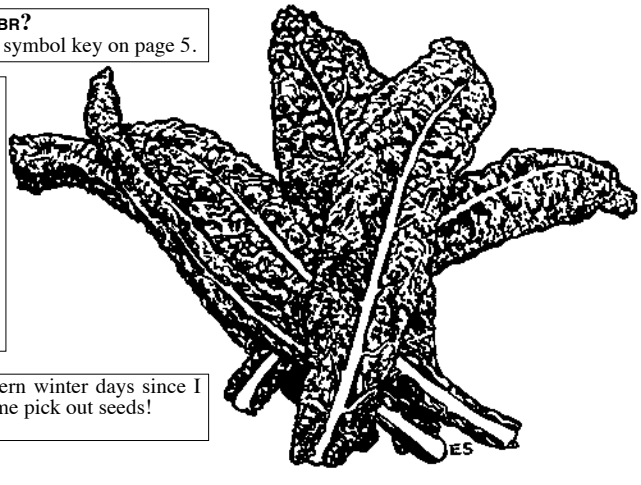
3467CP Nero di Tuscana or **Lacinato** (62 days) Open-pollinated. Also known as Cavolo Palmizio. The 'Tuscan Black' was described by Vilmorin-Andrieux in 1885 and traced back to the 18th century by William Woys Weaver who calls it "one of the most beautiful kales to grace any kitchen garden" and suggests interplanting with a vivid green lettuce for a spectacular color combination. Elemental, a stripped-down version of kale shaped like a miniature palm tree about 18" high. Very dark green wrinkled strap-like leaves appear almost black at a distance, looking minimalist compared with the lush curly-leaved kales. Its tough leaf strength makes it very sturdy for distributing into CSA boxes. Also used for microgreens. Delicious and nutritious as well as adapted to a wide temperature range, its sweet mild flavor improves after frost. According to Alan LePage, it demands more fertility than other kales. If it is looking anemic after the summer flea beetle invasions, LePage recommends sidedressing it with fertilizer or compost. Using this treatment, he's grown 6' plants! ②
A=2g, $1.80 **B**=4g, $3.00 **C**=14g, $7.00 **D**=28g, $8.00
E=112g, $13.00 **K**=448g, $45.00

❄? Ω? BR?
Complete symbol key on page 5.

Weight equivalents

1 gram =	.035 oz
3 grams =	.106 oz
6 grams =	.212 oz
24 grams =	.851 oz
120 grams =	4.24 oz
1/16 oz =	1.77 g
1/8 oz =	3.55 g
1/4 oz =	7.09 g
1/2 oz =	14.2 g
1 oz =	28.4 g





I've been drooling over Fedco seed descriptions on dark Northeastern winter days since I was a little girl, reading my mom's catalog. Now my own kid helps me pick out seeds!
– Nora Brown, Ithaca, NY

Siberian Kale *B. napus* (pabularia group)

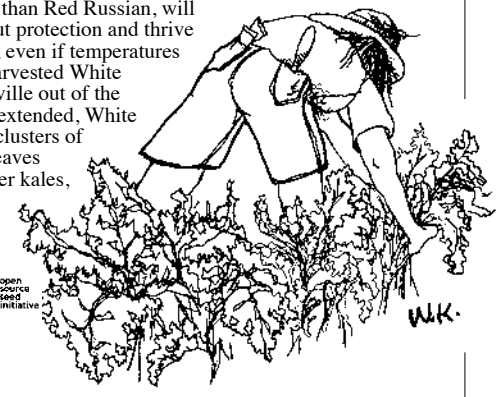
3460FO Russian Frills OG (55 days) Open-pollinated. A re-introduction of an almost-lost Oregon variety bred by Tim Peters. The folks at Adaptive Seeds discovered it being maintained by seedsman Peter Bauwens in Belgium. Similar to Red Russian when young, the purple and red-veined leaves get very frilly as they mature while remaining exceptionally tender. The dazzling frills upon frills upon frills make this 18–28" kale a great addition to kale bunches or mesclun mixes. With similar hardiness to **3464** White Russian, it makes a good tunnel plant. BR ❄ ①
A=2g, $2.10 **B**=4g, $3.50 **C**=14g, $8.00 **D**=28g, $11.00
E=112g, $34.00

Red Russian (60 days) Open-pollinated. Called Buda Kale by Fearing Burr in 1863, Ragged Jack by Vilmorin-Andrieux in 1885, and Communist Kale in 2006 by workers at Darthia Farm in Gouldsboro, ME. Russian traders brought this Siberian heirloom to Canada in the 19th century. It has undergone a rousing revival in recent years. Vigorous edible landscape plant a big hit for its tenderness and delicate flavor. Its oakleaf foliage colors after fall frosts. Use soon after picking, or chill leaves in cold water; otherwise wilts quickly. Red and purple veining changes to dark green when cooked. Also a popular variety for microgreens. Tolerates outside temperatures of 14° double-covered under **8874** Agribon 19. ❄

3461RC Red Russian ③
A=2g, $1.50 **B**=4g, $2.10 **C**=14g, $3.60 **D**=28g, $5.00
E=112g, $9.00 **K**=448g, $26.00 **L**=5lb, $120.00

3462RO Red Russian OG ②③
A=2g, $1.70 **B**=4g, $2.80 **C**=14g, $4.30 **D**=28g, $6.50
E=112g, $13.00 **K**=448g, $50.00 **L**=5lb, $230.00

3464WO White Russian OG (60 days) Open-pollinated. A flat-leaf Siberian type, silvery green with white veining. Similar to Red Russian, but a few inches taller, a third more productive, with larger, more serrated leaves. Also, much hardier than Red Russian, will hold into November without protection and thrive in an unheated greenhouse, even if temperatures go down to 0°. Gene has harvested White Russian outdoors in Waterville out of the January snow. If season is extended, White Russian will produce new clusters of smaller tender secondary leaves from old axils. As with other kales, flavor gets sweeter with frost. Tested negative for BR and BL. ❄ Ω ①

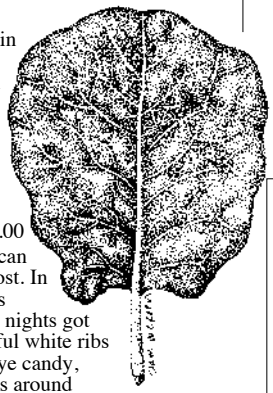


A=2g, $2.00
B=4g, $3.50
C=14g, $9.00
D=28g, $13.00
E=112g, $36.00
K=448g, $125.00

COLLARDS *B. o.* (acephala group)

~200 seeds/g. To avoid flea beetles, plant in July for September maturity. Collards are excellent microgreen crops. **All collards listed here are open-pollinated.**

3441VT Vates (60 days) Because of their cold hardiness, collards were a miracle crop that sustained many southern folks through the winters during the Great Depression. Vates is the acronym for Virginia Truck Experiment Station, a hotbed of collard research from 1907-1967. Introduced in the 1930s, this was probably the best-known of all the many developed there. Large upright 1½–2' plants give generous harvests of dark green thick crumpled leaves with a mild cabbage-like flavor. Will overwinter in high tunnels in our climate. ❄ ②
A=2g, $1.40 **B**=4g, $2.10 **C**=14g, $3.00 **D**=28g, $4.00
E=112g, $6.00 **K**=448g, $15.00



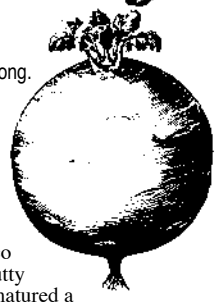
3443CH Champion (60 days) Rich dark Vates strain selected to stand longer. Thin to 12" apart for good size. Best as a fall crop. For greens into November in northern New England. On Cape Cod, Lillian Kuo was still harvesting Champion the second week of February without protection over a mild winter. Also survived Roberta's overwintering trial. Our southern friends enjoy the greens all winter. ❄ ② **BACK!**
A=2g, $1.40 **B**=4g, $2.00
C=14g, $3.00 **D**=28g, $4.50 **E**=112g, $6.00

3444VC Variegated ECO (61 days) Appearances can be deceiving. The variegation doesn't appear until frost. In my initial look at Donna Dyrek's trials one August its waxy leaves had a sickly yellow-green hue. After the nights got nippy, the plants had transformed, developing beautiful white ribs for a dazzling display of contrasting color. Not just eye candy, they're also sweet and tender eating. When fall comes around Dyrek throws the Champions to the animals and heads for Variegated. Florida family heirloom from around 1910, introduced 1999 by our friends at Southern Exposure. Still shows some variation. ②
A=2g, $2.40 **B**=4g, $4.00 **C**=14g, $12.00 **D**=28g, $21.00
E=112g, $75.00

KOHLRABI

B. o. (gongylodes group)

~100–300 seeds/g. Don't like kohlrabi? Try harvesting it young. It turns tough, woody and inedible if you wait too long. See p. 13 for Brassica disease information.

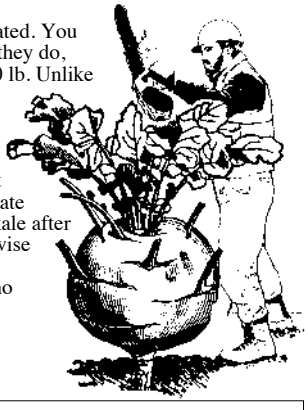


3470KN Konan (38 days) F-1 hybrid. 2016 AAS Winner. Author Robert E. Howard's sword-and-sorcery hero emerges once again…as a Kohlrabi? Indeed, the legend continues! A nicely rounded 3½" diameter head weighing ⅔ lb, Konan the Kohlrabi's rampant health and vigor aided its conquest of our 2018 kolhrabi trial, where one Fedco staffer deemed its crunchy crisp texture and mild nutty sweetness "barbarically good." This bold brassica matured a week earlier than our long-held Winner and showed equally high quality. High resistance to FY. Tested negative for BR and BL. ④ **NEW!**
A=25 seeds, $2.00 **B**=100 seeds, $6.00
C=500 seeds, $22.00 **D**=1,000 seeds, $35.00

3471KB Kolibri (45 days) F-1 hybrid. Reaffirmed this year as the best **purple** kohlrabi we've found: quick growing, very uniform, purple on the outside, crisp and white on the inside, reliable, good-tasting and productive. An August planting will size up in October. Very hardy; will winter over with only snow cover for protection—in fact made it through the open winter of 2011-12 in Maine. Interplant with **3036** (p. 28) Bright Lights swiss chard for a dazzling display. Tested negative for BR and BL. ❄ ④
A=0.5g, $3.30 **B**=1g, $5.00 **C**=4g, $15.00 **D**=14g, $48.00
E=28g, $94.00

3473WN Winner (45 days) F-1 hybrid. Longtime customer Brian Cramer of Hutchins Farm in Concord, MA, convinced CR to grow kohlrabi again for the first time in fifteen years. "Winner," Cramer said, "has been my most successful kohlrabi for many years, always beating out others I have tried in consistency, quality and appearance." CR grew Winner in 2012 and it proved to be everything Cramer said. Direct-seeded in late June into a severe drought, irrigated sparingly, thinned belatedly, it even survived his two-week midsummer absence and produced its lovely green stem bulb three weeks ahead of Early White Vienna. Its tender sweet flavor was a revelation. Perhaps you, too, have overlooked this unusual under-rated vegetable, or maybe you were just waiting for a real Winner? Tested negative for BR and BL. ⑤
A=0.5g, $2.50 **B**=1g, $4.00 **C**=4g, $9.00 **D**=14g, $30.00
E=28g, $56.00

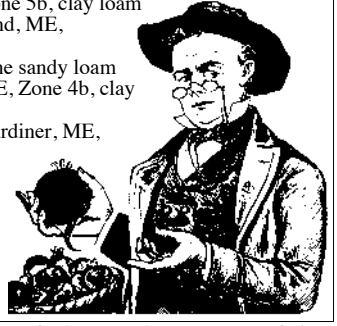
3475WV White Vienna (58 days) Open-pollinated. Dwarf heirloom variety with short tops and medium stems is no longer the earliest, but the uniform globe-shaped bulbs have crisp white tender flesh with great flavor and texture. Performed well in this year's taste test. Do not overcrowd. From Central Europe before 1860. ②
A=2g, $1.40 **B**=4g, $2.20 **C**=14g, $3.50 **D**=28g, $4.60
E=112g, $7.00 **K**=448g, $20.00



3478GI Gigante (130 days) Open-pollinated. You might guess that these get enormous. And they do, regularly exceeding 10" in diameter and 10 lb. Unlike other kohlrabi, this Czechoslovakian heirloom doesn't get woody even at such a large size. A root cellar staple, Gigante's crisp white mildly tangy flesh will add zest to your meals while you await the first edible greens of spring. Sow in spring for late fall harvest. Leaves sweeten like a tender kale after a few hard frosts in the fall and stems likewise become as delicious as their broccoli counterparts. A favorite of Jason Kafka who plants a 300' bed. ③
A=2g, $1.60 **B**=4g, $2.50
C=14g, $4.60 **D**=28g, $8.00
E=112g, $17.00 **K**=448g, $56.00

Meet our Trials Team

Anna Goff, Stonington, ME, a warm Zone 5b, clay loam
Donna Dyrek, Loon Song Farm, Hartland, ME, hillside Zone 5a, clay loam
Dylan Brown, Brooks, ME, Zone 5a, fine sandy loam
Heron Breen, St. Albans and Exeter, ME, Zone 4b, clay loam and sandy loam
Adam Tomash & June Zellers, West Gardiner, ME, Zone 4b/5a, sandy loam
Tom Vigue, Sidney, ME, Zone 4b/5a, stony fine sandy loam, well-drained subsoil
Jason Kafka told us he farms "in the Twilight Zone," Parkman, ME, Zone 3b, very stony silt loam



Leeks

Allium ampeloprasum (porrum group)

1 gram packet ~240–360 seeds, 1/16 oz packet ~400–600 seeds; 1 oz, 6,400–9,600. All open-pollinated.

Culture: Start indoors in Feb. or March and transplant out in spring almost as soon as the ground can be worked. Set 6–12" apart in trenches in well-dug beds with generous quantities of organic matter. Avoid transplanting next to grass strips; slugs love to dine on tiny allium seedlings. Irrigate seedlings whenever the topsoil dries out. Early leeks have tall shanks above ground and should be harvested before severe frosts. Hardier leeks have broader, shorter shanks and will hold till November. Leeks brought into the root cellar will survive almost all winter if heeled into soil.

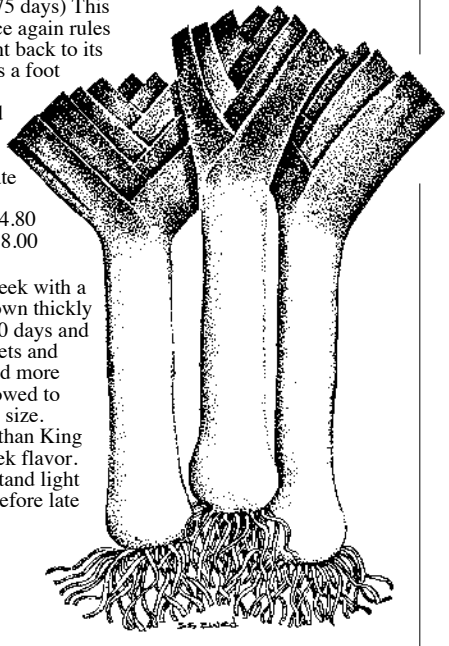
Minimum germination temperature 50˚, optimum range 60-70˚.

DM Downy Mildew
PR Pink Root

Leek seed is short-lived. Test 1-year-old seed before using. Discard anything older.

Days to maturity are from date of transplanting.

SUMMER LEEKS



2407KO King Richard OG (75 days) This distinctive refined early leek once again rules supreme—reselected and brought back to its elegant form with upright shanks a foot long to the first medium green leaves. Ready in late August and can withstand light frosts but should be harvested before those heavily frosted nights in late October. ①

A=1/16oz, $2.70 **B**=1/8oz, $4.80
C=1/2oz, $10.00 **D**=1oz, $18.00
E=4oz, $56.00

2408LN Lincoln (75 days) A leek with a dual purpose, Lincoln may be sown thickly like scallions, harvested in 50–60 days and bunched for upscale direct markets and discerning chefs. Or, transplanted more conventionally, they may be allowed to grow another three weeks to full size. Shanks even longer and sleeker than King Richard's with delicate sweet leek flavor. Ready in late August, will withstand light frosts, but should be harvested before late October. ④

A=1/16oz, $4.00
B=1/8oz, $7.00
C=1/2oz, $27.00
D=1oz, $52.00
E=4oz, $192.00

AUTUMN LEEKS

2411SO King Sieg OG (84 days) Beth Rasgorshek of Canyon Bounty in Idaho (profile on pg 8) crossed King Richard with Siegfried Frost leek to create a versatile stable cultivar that has some of the good attributes of both. Sieg appears to have inherited the most from Siegfried. Its shanks are intermediate between the long King Richard and the short Siegfried, about 6" long but with a wonderful 3" thickness for a wide edible area. It also has some of Siegfried's delightful blue-green coloration and delayed maturity. ☙2005. Ω ①

A=1/16oz, $2.30 **B**=1/8oz, $4.00 **C**=1/2oz, $9.00 **D**=1oz, $13.00
E=4oz, $38.00

2421LL Lancelot (90 days) "Great quality, disease resistance and size," says Tom Vigue. A dependable heavy-yielding virus-tolerant bolt-resistant leek. Suitable for late-fall harvest and possible overwintering in climates warmer than ours. Uniform 12–14" shafts with good thickness. A good substitute for Megaton. ④

A=1g, $3.40 **B**=2g, $6.00 **C**=4g, $10.00 **D**=14g, $28.00
E=28g, $50.00

WINTER LEEKS

2425BO Bleu de Solaize OG (110 days) This hard-to-find French heirloom is so-named because its dark green leaves sometimes develop a tinge of blue during cold spells. Hardy fat medium-long shanks with mild flavor good in soups. Dates back to the 19th century. Adam Tomash and June Zellers have successfully overwintered it in Zone 5 and trialer Donna Dyrek in Zone 4 with only straw mulch for protection. ①

A=1/16oz, $2.40 **B**=1/8oz, $4.00 **C**=1/2oz, $9.00 **D**=1oz, $13.00
E=4oz, $38.00

Varieties organized within sections by days to maturity.

Lettuce

Lactuca sativa L.

~1000-1100 seeds/g. All our lettuce is open-pollinated.

Culture: May be started indoors in March and at regular intervals thereafter for early transplanted successions. Direct seed outdoors as soon as ground can be worked and repeat every 2 weeks for continuous supply. Fall and overwintered harvests are becoming standard practice.

Lettuce grows best in cool seasons with ample moisture. It will not head unless thinned frequently and ruthlessly to a final distance of 1'. Heavy nitrogen feeders. The snowflake symbol ❄ after a cultivar description indicates that a variety is hardy through at least part of our Maine winter. For summer harvest, select varieties carefully: bolting, bottom rot and tipburn are problems if a variety can't take the heat! Using shade cloth can keep lettuce tender and sweet longer into summer.

Optimal germination temperature range 40–80˚. Many varieties won't germinate in soil temperatures above 75˚ and most shut down above 80˚.

Days to maturity are from direct seeding.

Diseases: For more information see the sidebar on p. 40.

B Bremia
BOR Bottom Rot
DM Downy Mildew
LMV Lettuce Mosaic Virus
SC Sclerotinia
TB Tipburn
X Xanthemonas

LETTUCE MIXES

Exact components will vary according to availability but are posted each year on our website.

Lettuce Mixes Light up your salad patch with contrasting colors and leaf forms! At least a half-dozen different lettuces, all suitable for cut-and-come-again culture.

2980LM Lettuce Mix ①②
A=1g, $1.80 **B**=4g, $4.20
C=14g, $8.00 **D**=28g, $13.00
E=112g, $40.00

2981LO Lettuce Mix OG A high-quality mix consisting entirely of certified-organic seed. For certified growers and folks wishing to avoid ④⑤ and ⑥ suppliers. ①②③

A=1g, $2.10 **B**=4g, $5.00 **C**=14g, $10.00 **D**=28g, $18.00
E=112g, $60.00

2983DO DeLuxe Lettuce Mix OG Contains those fancy, pricey and rare varieties; the Mercedes Benz of lettuce mixes and all organic! ①

A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $13.00 **D**=28g, $22.00
E=112g, $80.00

2984FO Freedom Lettuce Gene Pool OG An inspiring mix with lots of surprises, Frank Morton created this in his so-called "Hell's Half-Acre lettuce trial." He crossed his most disease-resistant with his best-tasting varieties to select for excellent traits. At least 10–12 "great looking and great tasting" variations won raves from trialer Donna Dyrek. Morton invites growers and breeders to work with this mix to create new varieties for their farms or for the general public, while stipulating that nothing derived from it may be patented or protected from others' use. This strategy is known as copyleft (as opposed to copyright). Morton has adopted it to keep his varieties and their derivatives in the public domain as a protected commons. Copyleft has the potential to return to free use such shared resources as our plant heritage that rightfully belong to all of us. (More about trait-patenting in sidebar on pg 40.) As Morton proclaims, "Adaptive breeding cannot occur under a system of restrictive ownership." Ω ①

A=1g, $2.80 **B**=4g, $8.50 **C**=14g, $22.00
D=28g, $40.00 **E**=112g, $150.00

2985RO Red Carpet Lettuce Mix OG Roberta Bailey's mixes are among the best in the business. She chooses from all the superior organically grown bronze and red varieties that we have in stock. Sure to dazzle. ①②③

A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $13.00 **D**=28g, $22.00
E=112g, $80.00

2986SM Summer Lettuce Mix A special selection of red, green and bronze lettuce varieties that most years will stand well into July without bolting. Our best-selling lettuce mix. ①②④

A=1g, $2.10 **B**=4g, $5.00 **C**=14g, $10.00 **D**=28g, $18.00
E=112g, $60.00

2988WM Winter Lettuce Mix For those who crave fresh salads most of the year, a popular selection of varieties with the potential to survive the winter with protection, then resume vigorous growth in the spring. ❄ ①②

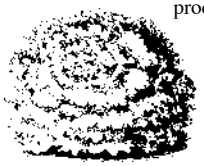
A=1g, $2.10 **B**=4g, $5.00 **C**=14g, $10.00 **D**=28g, $18.00
E=112g, $60.00

Ω **Independent plant breeders**, continuing a long tradition of adapting varieties to local tastes and conditions, are the backbone of culture. For the most part eschewing plant patents, their work is their reward. Fedco is committed to buying seed from small breeders to give economic support to their work. Though we can find cheaper seed elsewhere, we prefer not to compromise on quality or ethics. We hope you agree—by purchasing seed with the Ω symbol.

LOOSELEAF

These varieties, along with the **Oakleafs**, **Deer Tongues** and **Lollo Rossos** that follow, do not form tightly wrapped heads, but rather loose luxuriant whorls and mounds of leaves for salads, sandwiches and mixes.

2712BO Black Seeded Simpson OG (42 days) The earliest and most popular looseleaf variety. "One of our absolute favorites for early season production with heads up to 16" diameter," says NY State market lettuce grower Lisa Bloodnick. Large loose crumpled juicy light-green leaves slightly ruffled and blistered. Inner leaves tender and well blanched. Does not stand heat well; sow as early as ground can be worked. This heirloom probably came from England circa 1850. Germination showed some tolerance to warm temperatures. Resists DM and TB. ③



A=1g, $1.60 **B**=4g, $2.80 **C**=14g, $4.50 **D**=28g, $6.00
E=112g, $12.00 **K**=448g, $42.00

2791TO Tango OG (45 days) For many commercial growers, Tango is the looseleaf of choice for **overwintering** and for productivity in cool weather. A frilly standard in salad mixes and mesclun adding loft and interesting texture. Deeply cut pointed leaves have pleasant flavor and no bitterness. Bolts readily in hot summer, so plant accordingly if you want it to grow to full maturity. ❄ ②

A=1g, $1.80 **B**=4g, $4.00 **C**=14g, $8.00 **D**=28g, $10.00
E=112g, $33.00

Salad Bowl (46 days) Bright-green frilly notched leaves form lofty 12–14" compact rosette. Stands heat better than Black Seeded Simpson, but at its best in cool weather, not summer. 1952 AAS bred by Ross Thompson of the USDA. Has survived outside temperatures of 18° double-covered under Agribon 19.

2722SB Salad Bowl ②

A=1g, $1.40 **B**=4g, $2.10
C=14g, $3.00 **D**=28g, $4.50
E=112g, $8.00 **K**=448g, $20.00
L=5lb, $85.00

2723SO Salad Bowl OG ③

A=1g, $1.80 **B**=4g, $2.80 **C**=14g, $4.50
D=28g, $7.50 **E**=112g, $14.00 **K**=448g, $48.00 **L**=5lb, $200.00

Red Salad Bowl (46 days) Compact frilly rosettes of spectacular bronze-red oakleaves. Red at tips and on young growth, green at the base of the leaves. Nice buttery flavor. One of our most popular lettuces. A staple mesclun ingredient. Grows quite large in cool weather, but prone to bitterness and bolting in heat. Withstood outdoor temperatures of 14° double-covered under Agribon 19. Some warm-temperature germination tolerance. Introduced in 1955. Resists TB.

2728RS Red Salad Bowl ②

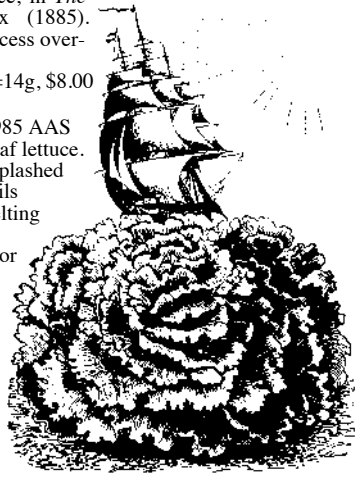
A=1g, $1.50 **B**=4g, $2.00 **C**=14g, $3.00 **D**=28g, $4.00
E=112g, $7.00 **K**=448g, $18.00 **L**=5lb, $82.00

2729RO Red Salad Bowl OG Improved stock features darker, more vibrant leaves and enhanced PM resistance. ③

A=1g, $1.60 **B**=4g, $2.80 **C**=14g, $5.00 **D**=28g, $7.50
E=112g, $16.00 **K**=448g, $50.00 **L**=5lb, $220.00

2731CO Cracoviensis OG (47 days) CR's absolute favorite of all the lettuces Seed Savers curator M. Schultz shared. Distinct in size, shape and color, Cracoviensis is where the red meets the green, making a dazzling twisting rosette with heavy purple accents towards the center. Recommended for spring and fall culture, the plants grow fast and very large (14–16") in cool temps. Called "Bolt-o-viensis" by Scott Paquin, it sends up seed stalks with just a touch of heat. No matter: the leaves' tender buttery flavor does not give way to bitterness even after bolting! Those thick fleshy bolted stems are prized in China where they are peeled and eaten like asparagus. Listed as a distinct type, Asparagus Lettuce, in *The Vegetable Garden* by Vilmorin-Andrieux (1885). Customers in NJ and MA have reported success overwintering it. ☘1996. ①

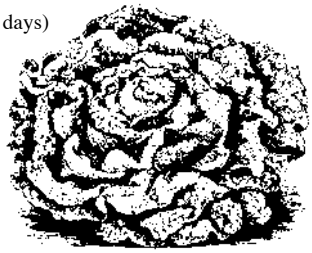
A=1g, $2.00 **B**=4g, $5.00 **C**=14g, $8.00
D=28g, $14.00 **E**=112g, $50.00



2761RO Red Sails OG (49 days) This 1985 AAS winner has become synonymous with red leaf lettuce. An attractive large plant with purplish red-splashed rosettes serrated with bubbled frills, Red Sails delivers lightly crunchy lobes with good melting texture. Ideal for home use and wholesale markets. Red Sails is slow to become bitter or bolt, even in heat. Reaches full size at 12–16", but can be harvested at 10" for a "one-cut" type head. Handle with care, as brittle midribs break easily during washing and packing. Highest rated of 13 lettuces for vigor in OSU trial. ①

A=1g, $2.20 **B**=4g, $4.00
C=14g, $8.00 **D**=28g, $12.00
E=112g, $31.00

2766YO Australian Yellow OG (50 days) In our trial the opalescent yellow-green leaves showed rapid growth yet were still holding their quality on July 19 when Waldmann's had bolted. Glossy yellow in the early stages, seedlings become more green as they mature, with the crinkly quality of a spinach and a sweet taste augmented by the barest hint of bitter. Frank Morton's strain is the best we have found. A worthy émigré from Down Under. ①



A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $12.00 **D**=28g, $20.00
E=112g, $68.00

2769WL Waldmann's (50 days) Attractive pre-1880 heirloom Grand Rapids-type. Waldmann's large loose whorled 12–14" dark green heads have long been a market-grower favorite. The lightly toothed crinkly blistered leaf has a blissful combo of sweetness, tenderness and crunch. Tolerated a bit of early summer heat in our dry scorching 2018 trials, but is best in cool conditions. Resists TB. ④

A=1g, $1.50 **B**=4g, $2.00 **C**=14g, $3.00 **D**=28g, $4.50
E=112g, $7.00 **K**=448g, $16.00

2773HO Hyper Red Rumple Waved OG (50 days) If you are drawn to really deep red lettuces, consider Hyper Red. Selecting from a cross between Valeria, a very red cold-tolerant lollo rosso, and Wavy Red Cos, an undulating savoyed red romaine, Frank Morton bred Hyper to accentuate pigmentation and ruffling. The striking result tastes good with a pleasing texture. Holds for a while in July before succumbing to heat. Good cold tolerance. No warm-temperature germination tolerance. Resistant to X, SC, DM and TB. Ω ①

A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $13.00
D=28g, $21.00 **E**=112g, $72.00

2775FO New Red Fire OG (51 days) Fire has gained a well-deserved popularity with commercial growers. Has Sails' characteristic ruffled leaves, though slightly lighter coloration, and good size. Has been among the last to bolt, lasting as late as July 29. Also quite cold-hardy. Tender sweet flavor with almost no bitterness. Resists BOR, DM, TB. ①

A=1g, $1.90 **B**=4g, $4.00
C=14g, $9.00 **D**=28g, $15.00
E=112g, $40.00

2783SL Slobolt (53 days) Slow early growth is the key to Slobolt's success as a summer lettuce. A 12–14" Grand Rapids-type with much lighter green leaves than Waldmann's, Slobolt often will hold well into July. Slobolt is versatile: one grower in NY reported good results growing it in winter under lights as well as tightly spaced in his summer garden. Introduced 1946 by USDA. Showed some ability to germinate in warm temperatures. ②

A=1g, $2.00 **B**=4g, $4.00 **C**=14g, $8.00 **D**=28g, $15.00
E=112g, $50.00

2786WO Red Tinged Winter OG (60 days) A leaf lettuce for three seasons introduced by Beth and Nathan Corymb of Meadowlark Hearth who selected and multiplied it from heirloom seed they brought from Europe. The lofty loose 10–12" compact heads with slightly ruffled leaves are green in their centers and lightly tinged with bronze toward the leaf tips. Can be harvested at 8" for "one-cut" salad leaf. Red Tinged was a hardy survivor in staffer Roberta Bailey's **overwintering** test, and Hildy Danforth of Shelburne, NH, said that "it was the best I've seen in my fall greenhouse and I've grown every lettuce with the word 'winter' in its name." Sow to mature in fall or late fall, or start in fall to overwinter and rally for major production in spring. Turns quite bitter in heat, so not for summer production. ❄ ①

A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $10.00 **D**=28g, $16.00
E=112g, $60.00

2789MO Merlot OG (32 days baby, 60 mature) William Woys Weaver correctly predicted that this lettuce would become a classic. Always a standout in our trials, its intense burgundy color the richest we have ever seen. This merlot adds as much to your baby salad mix as a good wine adds to your dinner, providing color, excitement and full-bodied flavor. Slow to grow, slow to bolt, plants never achieve much size or density, but are ideal for the baby-leaf trade. Not for mature-head production, so may be spaced closely. According to Mountain Dell Farms (growing at 1400' in the Catskills), can stand outside temperatures to 14° when double-covered under Agribon 19. Showed good resistance to BOR in recent challenging wet Julys. Germinates poorly in warm temperatures. Also resistant to X, DM, SC and TB. ❄ ①

A=1g, $2.60 **B**=4g, $7.00 **C**=14g, $14.00 **D**=28g, $23.00
E=112g, $86.00

2787MB De Morges Braun ECO (64 days) This bronze beauty is noteworthy among the hundreds of lettuces we've grown for its shimmery color and smooth buttery texture. Grows upright like a romaine as it matures, the center forming a green contrast to the pink outer leaves. De Morges grows slowly, never develops bitterness and is one of the last to bolt. We owe our awareness of it to Schultz. ① **BACK!**

A=1g, $2.00 **B**=4g, $5.00 **C**=14g, $9.00 **D**=28g, $14.00
E=112g, $50.00

OAKLEAF

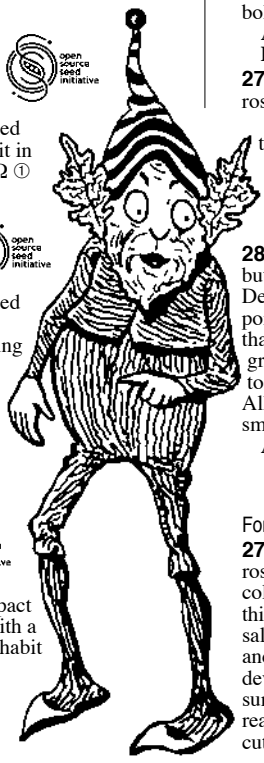
A looseleaf lettuce more tender and sweet than its namesake.

2788OO Oscarde OG (30 days baby, 45 days mature) This often imitated but never matched classic **miniature** oakleaf remains an industry standard. Deep red leaves are the darkest of their type we've found in our trials. Growing low to the ground, the loose heads shade to bright green at their hearts. Ideal for greenhouse culture in cold weather, also good outdoors in spring and fall. May be cut for mesclun or baby leaf. Resists DM. ❄ ①
A=1g, $3.00 **B**=4g, $9.60 **C**=14g, $24.00 **D**=28g, $44.00

2719BA Bronze Arrowhead (46 days) This Arrowhead scores a bullseye for form and color, developing a gorgeous oakleaf rosette in a dance of green and bronze. Introduced as Bronze Beauty by the Germania Seed & Plant Co, this bronze was given a bronze medal by the AAS judges in 1947. Good for mesclun and cut-and-come-again culture. Very slow to bolt. ①
A=1g, $1.90 **B**=4g, $5.00 **C**=14g, $8.00 **D**=28g, $13.00
E=112g, $46.00

2738AO Antares OG (48 days) A shimmery pink and bronze oakleaf growing vigorously to a magnificent 14–16" size. The extra-frilled finely cut bright leaves are colorful and tender, not bitter even in early July. Antares puts on a terrific show especially when started indoors, transplanted early in spring and allowed ample space. Bred by Frank Morton of Wild Garden Seed in Oregon out of a combination of **2722** (p. 37) Salad Bowl and **2865** (p. 40) Rouge d'Hiver. Ω ①
A=1g, $2.30 **B**=4g, $6.00 **C**=14g, $11.00
D=28g, $20.00 **E**=112g, $60.00

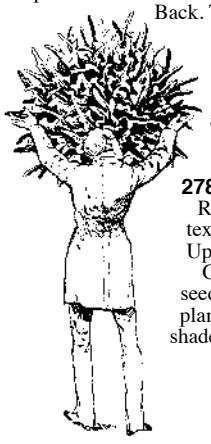
2764BO Blushed Butter Oaks OG (49 days) This 1997 Fedco introduction developed by Frank Morton is a compact oakleaf butterhead. Its 12" mounded upright form sports a delightful combination of pink and green rounded oakleafs with tenderness and buttery taste. Blushed Butter Oaks is a hit with everyone who sees and samples it in our trials. Better-than-average frost tolerance. ☙1997. Ω ①
A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $13.00
D=28g, $21.00 **E**=112g, $75.00



2763EO Elf Ears Oak OG (50 days) Frank Morton made Elf Ears Oak as small as the vigorous oakleaf-type lettuces will likely allow. The bright green leaf is lightly savoyed with deeply cut lobes, crowned in extra-extended narrow tips. With compact form, dense centers and elven oak leaves held upright, easy salad cutting or clean full-head presentation come naturally. In our hot and steamy 2018 lettuce trial, we found uniform Elf Ears' leaf sweet, tender and buttery, while full-size kin Italienischer is more crisp with slightly better heat tolerance. Selected for DM resistance. Ω ① **NEW!**
A=1g, $2.80 **B**=4g, $9.00 **C**=14g, $28.00
D=28g, $48.00 **E**=112g, $150.00

2781XO Merlox Red Oak OG (53 days) Frank Morton's first release of his "Merlox variations" combines the ultra-dark pigmentation of **2789** (p. 37) Merlot with the superior flavor of larger Emerald Oak. This uniform compact 10–12" oakleaf head boasts showy deep maroon leaves with a hint of blanched green in their centers. Loose but upright habit makes for clean cutting in salad-leaf harvest. Known as a cool-season lettuce, yet in the dry early heat of summer 2018 we found no bitterness at all—unique for such bold coloration. Good for winter culture as well: left outdoors in Central Maine with no row cover, mulched only by a generous snow cover, two-thirds **overwintered** and were ready to eat in early May. Bred with strong horizontal resistance to DM and SC. ❄ Ω ①
A=1g, $3.00 **B**=4g, $9.60 **C**=14g, $24.00 **D**=28g, $44.00
E=112g, $150.00

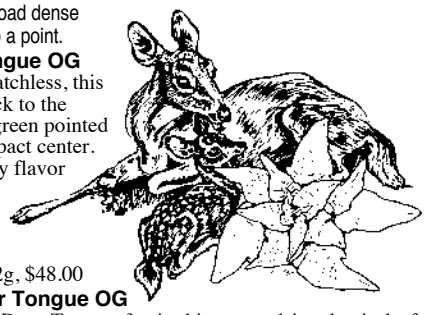
2784FO Flashy Green Butter Oak OG (54 days) Frank Morton officiated the spectacular marriage of Emerald Oaks' quintessential oakleaf form with the speckling of Flashy Trout Back. The result's rich lime-green leaves with pronounced but variable dark speckles are not only winsome but also amazingly tasty and crunchy with delightful buttery texture. Flashy's compact habit lends it to "mini" culture, and its excellent performance in cool weather and heat confirms its status as masterpiece. Ω ①
A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $12.00
D=28g, $20.00 **E**=112g, $60.00



2785TO Italienischer OG (55 days) More vigorous than Royal Oakleaf with bigger outer leaves, a better taste and texture, and less bitterness. Good, juicy and mild-flavored. Upright sturdy 14–16" bright green plants are slow to bolt. Give these huge beauties plenty of space. Some is black-seeded, some white-seeded, both true-to-type, though some plants will exhibit more of a buttercrunch leaf in a different shade of green. ①
A=1g, $2.00 **B**=4g, $6.00 **C**=14g, $12.00
D=28g, $20.00 **E**=112g, $72.00

DEER TONGUE

Deer tongue leaf lettuce has broad dense succulent leaves which taper to a point.



2740DO Green Deer Tongue OG (48 days) Also known as Matchless, this venerable heirloom goes back to the 1740s. Characteristic thick green pointed leaves radiating from a compact center. Slow to bolt. Has a rich nutty flavor that doesn't turn bitter. ①
A=1g, $1.70
B=4g, $4.50
C=14g, $8.00
D=28g, $13.00 **E**=112g, $48.00

2744RO Really Red Deer Tongue OG (48 days) We revered Red Deer Tongue for its history and its classic leaf shape, but not for its pallid color and vulnerability to disease. Morton combined it with his own **2773** (p. 37) Hyper Red Rumple Waved to develop a series of Really Red breeding lines. Morton then re-selected for deep red color, white-green contrasting veins and pointed deer-tongue leaves for a variety with much less variation, a stunning improvement over the original Red Deer Tongue. From Hyper comes heightened resistance to SC, DM, X and TB. Though not among the best summer lettuces, RRDT stands heat better than its forebears and does not bolt as readily. ☙2005. Ω ①
A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00
D=28g, $19.00 **E**=112g, $65.00

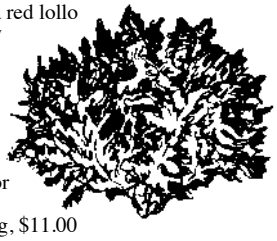
2767DO Les Oreilles du Diable (Devil's Ears) OG (50 days) Starlike rosettes of tasty glossy leaves are deeply tinged with burgundy for a shimmery appearance. We enjoy its nutty texture and bitter-free flavor. One of the last to bolt. A standout in our plots where we greatly preferred it to Red Deer Tongue for its color and good heat tolerance. One of the lovely rare treasures once maintained by the Abundant Life Seed Foundation. ①
A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $9.00 **D**=28g, $14.00
E=112g, $52.00

2836YO Red Eared Butterheart OG (56 days) Not a true butterhead, instead looks like a cross between **2744** Really Red Deer Tongue and a red Boston bibb-type. Its red ears—dark pointy leaves—are shorter, broader and more buttery and folded than RRDT and the plant is less upright. Pronounced veins are green, shading toward red in the center, and contrast with its dark red leaves to give it striking good looks. Completely free of BOR, even in wet years. Allow generous space to accommodate its vigorous growth. Still showed a small amount of variation in our trials. Ω ①
A=1g, $2.40 **B**=4g, $7.00 **C**=14g, $14.00 **D**=28g, $22.00

LOLLO ROSSO

Forms a fully frizzy tight mound of leaves, which lend loft and flair to mixes.

2792RO Revolution OG (48 days) As rich a red lollo rosso as anyone could want. Enjoy its intensely colored 10–12" deeply frilled, densely packed, thick crunchy leaves that provide good loft to salad mixes. This Revolution has good vigor and can hold a very long time without developing much bitterness. Before the hot summer sun brings about that inevitable reaction, guillotine it with your garden shears or cutting knife. Resistant to B. ①



A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00
D=28g, $18.00 **E**=112g, $55.00

2793LO Dark Lollo Rosso OG (53 days) A much darker version of **2796** Lollo Rosso, holding its color even under row covers, in tunnels or during prolonged cloudy periods. Our trialer describes it as "fat, curly and very red." Adds color, texture and loft to baby leaf mixes. Begin snipping after only four weeks. Develops bitterness if allowed to size up in heat. ②
A=1g, $1.80 **B**=4g, $4.00 **C**=14g, $7.00 **D**=28g, $10.00
E=112g, $30.00

2795VO Lollo di Vino OG (56 days) Its originator Frank Morton calls it a "distinctive little frizzlehead." Di Vino stands out for its dark purple color that originated in its Merlot parentage. This compact beauty has ruffles and curls of vintage lollo, but a mildness uncharacteristic of deeply pigmented lollos. Its distinctive lack of bitterness allows the harvest to extend longer into summer than any other dark lollos we have tried. Ω ①
A=1g, $2.60 **B**=4g, $7.00 **C**=14g, $17.00 **D**=28g, $32.00
E=112g, $110.00

2796LR Lollo Rosso (58 days) For loft and texture, used in salad mixes and as a garnish, this ornamental delight has been embraced by gourmet restaurants. Frizzy foliage is light red on top, light green at base, melding into an eye-catching display. Very cold hardy. This strain is not as colorful as the two Lollos above, but it was milder, less bitter, and slower to bolt than others in our trials. ❄ ③
A=1g, $1.80 **B**=4g, $3.60 **C**=14g, $7.00 **D**=28g, $11.00
E=112g, $30.00

BUTTERHEAD

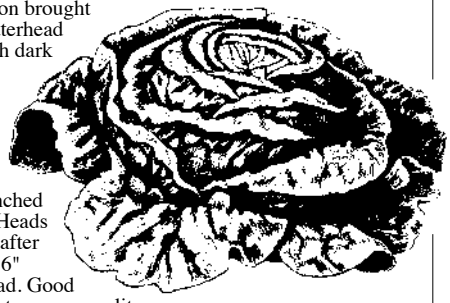
2803TT Tom Thumb (46 days) This venerable and adored **miniature** butterhead was introduced in England by H. Wheeler & Sons in 1858. It came to the States ten years later. One customer wrote to Burpee's in 1894, "It is just what the gardener wants…a good dwarf variety, a quick grower." Staffer Heron calls it "fairy cabbage." In the dewy cool of spring or fall, Tom Thumb forms its extra-early tightly bunched tiny head. With sweet buttery light-medium green outer leaves and creamy white crunchy centers, it's tasty and attractive for early markets. Can be closely spaced as the heads seldom exceed 5" in diameter. Please do not attempt to grow it in warm temps—it turns into an ugly toad! ②

A=1g, $1.50 **B**=4g, $2.10 **C**=14g, $3.00
D=28g, $4.50 **E**=112g, $8.00 **K**=448g, $20.00

2805BM Bronze Mignonette (46 days) Charming us again in 2018, this **small** 8" ruffled bronze-tinged butterhead continues to captivate in our trials. Slightly larger than Tom Thumb and with a broader tolerance of warm temps, it's an ideal choice for baby vegetable enthusiasts. Its silky buttery leaf and petite stature assures that you can fit it into your farm and garden plans, and into your salads. Introduced around 1898. ②

A=1g, $1.50 **B**=4g, $2.10 **C**=14g, $3.00 **D**=28g, $4.50
E=112g, $8.00 **K**=448g, $20.00

2809CO Carmona OG (50 days) Also known as Carmona Red or Carmona Red Tip. Frank Morton brought this Canadian heirloom red butterhead back from near extinction. Lush dark green butterhead base is fully blushed carmine and pebbled with bronze and brown. Stunning, but the taste is what will keep you coming back. Outer leaves are sweet, juicy and buttery while the well-blanched interior is tender and melting. Heads mature slowly and tighten just after color-mate **2828** Pirat. Broad 16" plants mound to a 6" center head. Good disease resistance and of market-grower quality, Carmona showed long field holding and excellent bolt resistance again in tortuous 2018. We observed one in six plants is more blond and less red, but wonderful nonetheless. ①



A=1g, $3.00 **B**=4g, $9.60 **C**=14g, $22.00 **D**=28g, $40.00
E=112g, $140.00

2811BU Buttercrunch (50 days) Our trials evaluator calls this 8–12" butterhead "the cucumber of lettuce, smooth and soothing with a green refreshing flavor." Dark green outer leaves with creamy center heart. Bloodnick praises its "sweet, succulent broad mid-ribs." Slow to bolt, but can be prone to bottom rot. Some ability to germinate in warm temps. A 1963 AAS developed by Dr. G.L. Raleigh at Cornell. Always our best-selling lettuce. ④

A=1g, $1.50 **B**=4g, $2.10 **C**=14g, $3.00 **D**=28g, $4.50
E=112g, $8.00 **K**=448g, $18.00

2814NO North Pole OG (51 days) We don't wait for Santa Claus—we have a seed grower out west producing this popular extremely cold-hardy butterhead for us. Protected only by snow cover, all of Donna Dyrek's plants survived a mild Zone 4 Maine **winter** outdoors. Can be set out under cover 2–3 weeks before first frost to aim for 4–6" plants at the onset of winter weather. Will resume vigorous growth as days grow longer, tolerating spring frosts. Elegant lime-green 6–8" buttery heads, sweet and tasty. Not for summer—it will bolt and turn bitter, but suited for the other seasons. ❄ ①

A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00 **D**=28g, $19.00
E=112g, $45.00

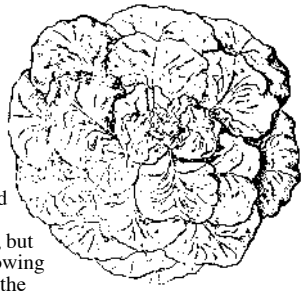
2815PO Optima OG (52 days) Released by French seedhouse and breeder Vilmorin in 1995. This dark green uniform Nancy-type butterhead caught lettuce master Frank Morton's eye with its large plant and head size, and workhorse performance. We were equally wowed as slow-bolting Optima held its lush looks and high quality in 2018's hot and steamy lettuce trial. Optima's juicy sweetness and silky texture could truly define a new category: Tenderheads! High resistance to DM, BR, and TB. ① **NEW!**

A=1g, $2.40 **B**=4g, $7.20 **C**=14g, $18.00 **D**=28g, $28.00
E=112g, $96.00

Mini heads: Mini lettuce heads are increasingly popular for wholesale accounts and winter harvests. Home gardeners with a succession of minis can reap endless single salads. You'll find minis across the cold-hardiness and heat-tolerance spectrum. We've held these little class acts up against the expanding utility-patented mini-types (see sidebar p. 40) and found comparable or better performance. While we do not intend to "go big" on tiny types, we add excellence as we find it. Here's what we have so far:

Oscarde oakleaf
Tom Thumb butterhead
Bronze Mignonette butterhead
Pandero romaine
Jadeite romaine
Gildenstern iceberg

2816MO Winter Marvel OG (52 days) Polly Gottesman of Pumpkin Ridge Gardens, North Plains, OR, wrote, "Here in Zone 7 Winter Marvel is bar-none the best overwintering lettuce we grow…We start harvesting outer leaves for salad mix in December…they continue producing without bolting through March." A large fancy light green butterhead recommended for fall production and **overwintering** where the climate permits. Grows rapidly, but bolts readily in summer heat. If you are sowing in spring for an early summer butterhead, the harvesting window is very narrow. An old European variety. Do not sow in soil temperatures over 80°. ❄ ①



A=1g, $2.10 **B**=4g, $5.00 **C**=14g, $8.00 **D**=28g, $13.00
E=112g, $45.00 **K**=448g, $160.00

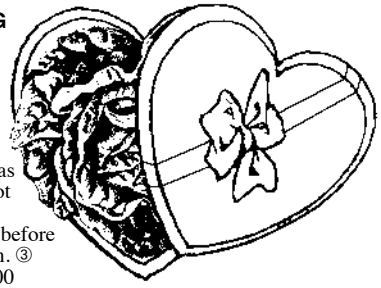
2828PO Pirat OG (55 days) From Germany, also known as Sprenkel and Brauner Trotzkopf. Elegant green 12" butterhead with light brown pebbling. Heads like loose large softballs at maturity. Delicious smooth taste with creamy texture, and holds well except in prolonged wet spells. Descended from Merveille des Quatre Saisons but much more bolt resistant. ①

A=1g, $2.40 **B**=4g, $7.00 **C**=14g, $12.00 **D**=28g, $21.00
E=112g, $72.00

2831SO Speckled Amish OG (55 days) An ornamental bibb of spectacular beauty, its apple-green leaves are variably splashed with maroon flecks, a stunner whether in your garden or in your salad. Small firm mild-flavored 10" heads shaped like Merveille des Quatre Saisons, centers with soft leaves blanching creamy yellow. Mennonites brought seed in a covered wagon from Lancaster County, PA, to Ontario in 1799. Introduced into commerce in 1880 as Golden Spotted. Frank Morton has been selecting to alleviate TB. ①②

A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $12.00 **D**=28g, $20.00
E=112g, $60.00

2834VO Sweet Valentine OG (56 days) A real sweetheart of a lettuce, Valentine combines magnificent beauty with mild sweet taste. Beginning as a large spreading bronzed butterhead with rounded veined leaves, it matures into a romaine shape. Has been very slow to bolt even in hot dry conditions. Flavor is more delicate, soothing and less bitter before it assumes romaine configuration. ③



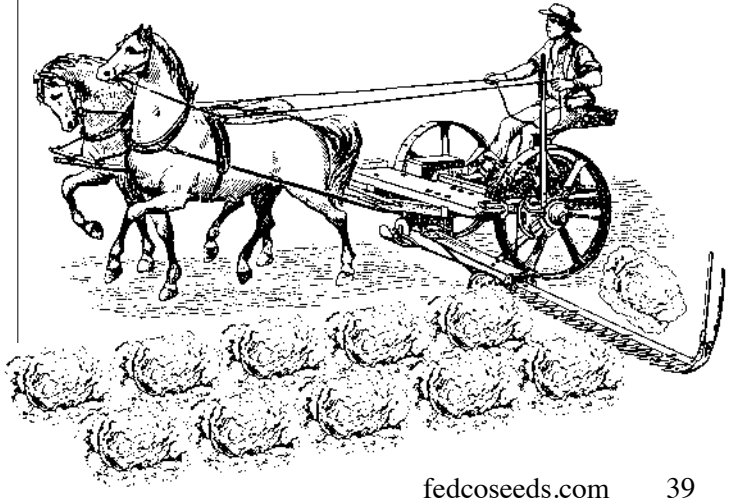
A=1g, $2.00 **B**=4g, $5.00
C=14g, $10.00 **D**=28g, $18.00 **E**=112g, $50.00

2841NO Nancy OG (58 days) The best one-word description of this elegant butterhead rhymes with its name—and it's neither antsy nor chancy. This big Boston butterhead has thick medium-green leaves that make a very tight well-developed heart. Smooth and buttery with a delectable taste and texture. It holds well in the field, a standout both for commercial growers and home gardeners. Though usually slow to bottom rot, it did struggle with severe BOR in 2013. Intermediate resistance to LMV. ① **BACK!**

A=1g, $2.00 **B**=4g, $5.00 **C**=14g, $9.00 **D**=28g, $15.00
E=112g, $50.00

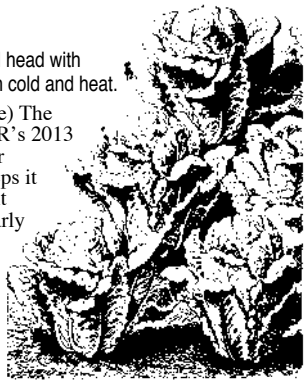
2839KS Kagraner Sommer (58 days) Elegant light green 10–12" butterhead of exceptional tender succulence, especially given the warm early-to-mid July slot when it matures. "For years has been our main summer lettuce. A great heat resister," lauds Anne Elder. The satiny heads are wound less tight, but are lusher in flavor than Buttercrunch. In our trials, the secret snackers always wish we had planted just a few more. ②

A=1g, $1.40 **B**=4g, $2.20 **C**=14g, $5.00 **D**=28g, $8.00
E=112g, $18.00



ROMAINE

Also called **Cos**. Large crisp-stemmed leaves wrap into a tall head with buttery but snapping blanched centers. Great performance in cold and heat.



2852PO Pandero OG (44 days baby, 63 days mature) The **mini**-romaine runaway star of 32 lettuce varieties in CR's 2013 trial, this very deep purple version of a compact Winter Density–type develops pronounced color early and keeps it through its entire growth cycle. Our taste tasters rated it sweet, mild and juicy with good crunch. Best sowed early and harvested small for salad mix or baby romaine because it will bolt in heat. Planting for fall allows it to mature its striking self-contained 6" head. Cold-tolerant, suffered only sparse BOR during recent wet Junes. ①
A=1g, $3.00 **B**=4g, $9.60
C=14g, $20.00 **D**=28g, $36.00

2854BO Blushed Butter Cos OG (49 days) A combination butterhead-romaine with ruffled savoyed leaves dappled in an attractive palette of reds and greens. Butter Cos was judged to be #1 for taste out of more than 100 lettuces the first time we tried it, years ago. Remarkably crisp for such a buttery taste. ☙1997. Ω ①
A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $13.00 **D**=28g, $22.00
E=112g, $70.00

2855JO Jadeite OG (50 days) Fresh from Frank Morton's legendary lettuce breeding program! True to name, **mini**-romaine Jadeite's matte apple-green rounded leaf and graceful small vase form looks carved. It practically glowed from within with pristine health through our hot and humid 2018 lettuce trial. With a delicate crunch, a dash of juicy sweetness, and touch of buttery texture to the blanched yellow hearts, Jadeite's small stature yields artisan-quality flavor. While not as furnace-proof as full-sized romaines, Jadeite has good heat tolerance and very good cold hardiness, allowing closely spaced successions through many seasons. Ω ① **NEW!**
A=1g, $3.00 **B**=4g, $9.00 **C**=14g, $24.00 **D**=28g, $35.00
E=112g, $130.00

2856JO Mayan Jaguar OG (51 days) Although we've grown a lot of trendy splotched lettuces in the last decade, this cat's mottled maroon spots on dark green ruffled leaves win the blue ribbon for most vibrant color definition. And it has great flavor, too, sweet juicy veins, blushed pink hearts and what breeder Frank Morton refers to as "that bone crusher romaine crunch!" It gets off to such a quick start, yet doesn't grow very large or thrive in intense heat, making Jaguar a great candidate for early salad or mesclun. Fierce colors, snarly crunch, but really a pussycat at heart. Ω ①
A=1g, $3.00 **B**=4g, $9.60 **C**=14g, $20.00
D=28g, $36.00

2857FN Forellenschluss (56 days) Also known as Freckles or Trout Back, an heirloom from Arche Noah. An absolutely gorgeous romaine with the delicate taste and texture of a butterhead, distinguished for its deep green leaves flecked with wine-red splotches. Lately we've seen increasing variation in the coloration and degree of splotching. The best-tasting of the 50 lettuces in our 1998 trial. Very buttery tender leaves may be harvested at 4–6" for mesclun or allowed to grow full size for maximum ornamental benefit. William Woys Weaver traced Forellenschluss back to 1793; it was a dwarf variety of Spotted Aleppo developed in Germany. More upright and cup-shaped than **2831** (p. 39) Speckled Amish, with better heat tolerance. Some warm-temperature germination tolerance. ②
A=1g, $1.80 **B**=4g, $4.20 **C**=14g, $8.50
D=28g, $13.00 **E**=112g, $26.00

2849WD Winter Density (60 days) Also known as Craquerelle du Midi, a French heirloom from the 19th century. Is it a bibb or a romaine? Any way you look at it, its thick tender dark green leaves make superb eating. Starts out looking like a bibb, then wrapper leaves fold tightly, forming a head like a romaine when mature. Combines the substance of romaine with the tender succulence of bibb. No warm-temperature germination tolerance. ❄ ②
A=1g, $1.70 **B**=4g, $2.50 **C**=14g, $4.00 **D**=28g, $6.00
E=112g, $11.00 **K**=448g, $32.00

2860MR Majestic Red (60 days) Fancy savoyed rich bronze-red leaves make Majestic positively gorgeous. Cylindrical open head has a spreading habit and huge colorful leaves with crisp romaine texture and juicy sweet non-bitter flavor deep into the heat of summer. Unheralded performance for a red-toned type, Majestic is one of the best-tasting and slowest-bolting romaines we've trialed. Developed by Sunseeds. ②
A=1g, $1.70 **B**=4g, $4.00 **C**=14g, $8.00 **D**=28g, $12.00
E=112g, $25.00

2861JO Jericho OG (60 days) Has become the classic summer romaine for warm regions. If the walls are tumbling down on your summer lettuce, try Jericho, bred in Israel's hot dry climate. An imposing romaine, under fertile conditions it can grow dense hefty 2' tall heads of light green sword-shaped upright leaves. Yet it remains crisp, juicy and unusually sweet, most years resisting TB or bolting well into July. Remains attractive even in bad years and tolerates BOR. ①
A=1g, $2.10 **B**=4g, $5.50 **C**=14g, $10.00 **D**=28g, $18.00
E=112g, $50.00

2862DO Better Devil OG (60 days) Frank Morton's Devil is finally gaining the customer appreciation it deserves. A really superior romaine lettuce, standing out in many of CR's trials. When it romaines, it sends up gorgeous purple ruffled center flag leaves. Its large veins, green tinged with purple, are crunchy, juicy and sweet with a hint of bitterness. The texture of its tapered cos-like leaves is chewy and pleasant. Recommended for early spring planting, resisted BOR and showed a moderate ability to withstand heat. Plants compact, uniform and dazzling even when crowded. Ω ①

A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00 **D**=28g, $20.00

2865RH Rouge d'Hiver (65 days) The true Rouge d'Hiver, black-seeded, with much deeper red outer-leaf coloration than Brune d'Hiver with which it is sometimes confused. Inner leaves are green with deeply bronzed tip, an attractive color combination. Forms a semi-open romaine head with excellent flavor, especially in cold weather. Develops pronounced bitterness in summer heat. *Hiver* means 'winter' and Rouge is more suitable for fall production or **overwintering** than for summer. French 1840s heirloom listed by Vilmorin in 1885. Resists TB. ❄ ②
A=1g, $1.50 **B**=4g, $2.10 **C**=14g, $3.00 **D**=28g, $4.50
E=112g, $8.00 **K**=448g, $22.00

2866PO Plato II OG (65 days) A lettuce fit for a philosopher-king, Plato sets a high standard for sweet taste in a romaine, holding its quality well into summer without bitterness, bolting or any tendency to TB. Morton also found it more resistant to DM and SC than any of the other green romaines in his plot. Attractive dark green slightly ruffled heavily veined leaves. ①
A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00 **D**=28g, $18.00
E=112g, $45.00

2874LO Olga OG (66 days) Elegant lime-green Olga won our hearts in our 2006 lettuce trials. Big upright 8" oval heads with big hearts, big flavor and slightly fringed leaves. So sweet, crisp and buttery that Morton thinks she must have some butterhead in her background. Stood considerable heat before developing slight TB and bitterness in August. ①
A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $12.00 **D**=28g, $22.00

2877MO Marshall OG (67 days) We first discovered Marshall in the Territorial catalog: "Gazing into the heart of this romaine is like falling into a burgundy abyss." As Merlot is to looseleafs so Marshall is to romaines, the standard for color intensity. Deep dark red leaves with contrasting pink veins, and a smidgen of green in the center. Tall upright 8" heads. Leaves smooth and succulent, crisp and chewy, lacking the bitterness usually associated with such coloration. ① **BACK!**
A=1g, $2.00 **B**=4g, $5.00 **C**=14g, $9.00 **D**=28g, $15.00
E=112g, $45.00

"I wish my work to be shared, not monopolized."
–Lettuce breeder extraordinaire Frank Morton

Genetic engineering is not the only ethical issue in seed production. A new and disturbing trend in lettuce and flowers is the prevalence of trait- and utility-patented varieties. One of our competitors listed more than one third of its lettuce varieties as utility- or trait-patented. Another carries these varieties but does not label them. Utility patents stand the traditional rationale for variety protection on its head. The original reason advanced in its support was to offer breeders an economic incentive to develop new varieties for agricultural improvement. Utility patents, by extending ownership beyond individual varieties to their traits (such as heat tolerance and leaf color) that are found in nature, stultify any possible future breeding improvements by monopolizing those traits that rightfully belong to the commons, cutting off any opportunity for other breeders to work with them for about 20 years. Once traits are tied up in private hands, varietal improvement comes to a halt.

You will not find any trait- or utility-patented varieties in the Fedco catalog because such patents are against our ethics. Free the seed! Use seeds in the public domain and shun utility-patented varieties. For more information see page 106. Also see Morton's essays found at wildgardenseed.com.

Pest: Aster Leafhopper (vector for Aster Yellows disease)
Cultural controls: control perennial broadleaf weeds near lettuce plantings, plow lettuce fields immediately after harvest.

Pest: Slug
Cultural controls: avoid mulch or nearby grassy areas.
Material: Sluggo (**8741-4**)

Disease: Bottom Rot
Cultural controls: rotate with grass-family green manures, plant in well-drained soil or on raised beds, more upright varieties escape infection.

Diseases: Downy Mildew, Grey Mold, White Mold
Cultural controls: rotation, reduce duration of leaf wetness, plant parallel to prevailing winds, use wide spacing, control weeds, use well-drained fields in spring and fall.
Material: Actinovate (**8702**), Milstop (**8666**)

2879PI Parris Island Cos (68 days) The standard market romaine developed by Clemson University and the USDA in 1952. Upright 8–9" heads fold inward to form compact centers. Interior greenish-white. Resistant to TB and bolting, even in heat. Irrigation improves its texture. Cos is an island in the Dodecanese region of Greece where this type of lettuce was named. Parris Island is in South Carolina. ②

A=1g, $1.50 **B**=4g, $2.10 **C**=14g, $3.00 **D**=28g, $4.50
E=112g, $8.00 **K**=448g, $18.00

2883CO Crisp Mint OG (70 days) Also known as Erthel. Named for its ruffled mint-leaf appearance, not for any minty flavor. Good size, exceptional crispness and sweet flavor with little bitterness even in mid-July. This long-standing dark green romaine with an open habit and a rounded top was a standout two consecutive years. Notes from CR's original trial in 1999: "Lovely and delicious, crisp and sweet. Nice size, ruffled leaves, GET THIS!!" It's still a winner in our recent trials. Slow to bolt, though some tendency to TB in July heat. ②

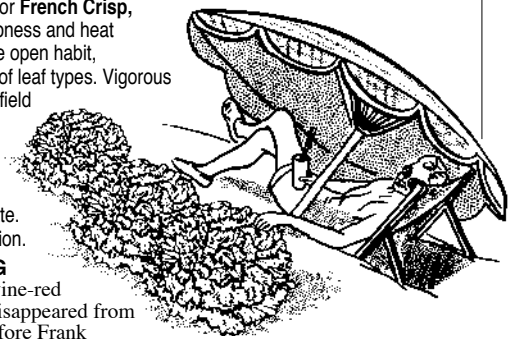
A=1g, $2.30 **B**=4g, $6.40 **C**=14g, $12.00
D=28g, $20.00 **E**=112g, $62.00

2886WO Winter Wonderland OG (70 days) Did you say wintah? Last year we got a good reminder of just how tough a Maine winter can be. We really appreciate a lettuce that makes it through the rigors. Winter Wonderland was one of the lettuces to survive Roberta's **over-wintering** test. Full disclosure: that test occurred in a warmer winter than the last one. A 2' tall erect romaine with dark green leaves and a spread of about 1', Wonderland is slow to bolt in heat but we recommend it for farming the dark side of the calendar. White seed. ❄ ① **BACK!**

A=1g, $2.00 **B**=4g, $5.00 **C**=14g, $9.00 **D**=28g, $14.00
E=112g, $50.00

BATAVIAN

Also called **Summer Crisp** or **French Crisp,** Batavians combine the crispness and heat tolerance of Iceberg with the open habit, sweetness and tenderness of leaf types. Vigorous growth, large stature, great field holding, slow bolting and wonderful flavor make this class an excellent summer harvest choice in the fluctuant northeastern climate. Good hot-weather germination.



2905DO Cardinale OG (48 days) This alluring wine-red European batavian had disappeared from commerce for a while before Frank Morton rescued it. Cardinale is a classic both for baby leaf and hefty 14–16" full head production. With elements of butterhead and romaine in habit and flavor, upright but open rosettes fold together like a romaine in the center at full maturity. Shiny broad lightly blistered fringed red leaves on the outside, green toward the center with crisp and juicy ribs. Survived temperatures in the teens in Janine Welsby's unheated greenhouse under a double layer of Agribon 19 topped with old bed sheets. ①

A=1g, $2.40 **B**=4g, $7.00 **C**=14g, $13.00 **D**=28g, $22.00
E=112g, $80.00

2908TO Concept OG (51 days) The Concept here is a combination of a batavian with a romaine. As the plant reaches full maturity, the whorling thick succulent juicy medium-green leaves start to close up at the top. Can be used for baby lettuce or allowed to mature into a vase-like bunch. As with most batavian types, it is relatively tolerant of hot weather and rarely bitter. "Concept is the only lettuce I can be sure of in Florida summers," relates Marilynn Marcks of Port St. Lucie, FL. ①

A=1g, $2.30 **B**=4g, $6.00 **C**=14g, $14.00 **D**=28g, $26.00

2918PB Pablo (68 days) Pablo bears a superficial resemblance to a red iceberg, but is a batavian, not a crisphead. Its larger plants form loose heads of beautiful upright rosettes surrounded by wide wavy-edged flat leaves. Bronze coloration on the outside leaves contrasts strongly with the green interiors lending a striking metallic sheen. Very sweet and mild with some bitterness in the ribs, slow-growing and extremely heat resistant. Always one of the last five to bolt in our trials—sweet to the bitter end. Lovely enough to stand as an ornamental, but also one of the best-tasting. From Seed Savers Exchange. ②

A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00 **D**=28g, $20.00

2921NO Anuenue OG (72 days) Its mellifluous Hawaiian name (pronounced AH-new-ee-new-ee) means 'rainbow' even though it is a uniform dark green. Anuenue doesn't look like much in June when most other lettuce is in full glory, but as the days get shorter and the heat gets stronger it really comes into its own. In late July and even early August, this 1987 University of Hawaii introduction has no peers for crispness and sweetness and never develops any bitterness. Slow growth is its secret. It remains compact as it matures, surrounding its round tightly packed heart with crisp outer leaves. Unlike most lettuces, seed will germinate at 80°. Has shown some winter hardiness with protection. ①

A=1g, $2.00 **B**=4g, $5.00 **C**=14g, $10.00 **D**=28g, $18.00
E=112g, $56.0

ICEBERG or CRISPHEAD

According to Vaughan's 1904 seed catalog, Iceberg takes its name from the small indentations in the leaf that constantly fill with dewdrops giving them a crystalline appearance. With its toothed and fringed light green leaf, famous crunchy juicy texture and mild sweet flavor Iceberg has become an iconic American food. Late to make mature heads, Icebergs face heat and stress with grace and tolerance—lettuce lessons for our politicians?

2713GO Gildenstern OG (46 days) Could this **mini**-iceberg be called an "ice cube"? Folded and blistered light green leaves wrap into a tight crisp whorled 4" head that easily makes a single-serving salad. This latest victory from breeder Frank Morton's Merlox derivations combines an iceberg look and juicy crunch with wonderfully smooth butterhead texture. Market growers will find uniformly early maturing but slow-bolting Gildenstern a good four-season mini-crisphead, resistant to TB, DM and SC around the calendar. Ω ① **NEW!**

A=1g, $2.70 **B**=4g, $8.00
C=14g, $20.00 **D**=28g, $32.00
E=112g, $105.00

2714JO Jack Ice OG (48 days) Frank Morton discovered early hardy Jack Ice in a random sample of Reine des Glaces. A head of iceberg is a treat in the summer heat, but the class is well-known for maturing at a glacial pace. Dark green 11" Jack Ice delivers a perfect uniform "headless iceberg" crispleaf early in the season, giving growers and gardeners the expected "ice" crunch and sweetness without the wait. Jack's slightly pebbled extra-toothed fringed leaf and broad-centered whorl is suited for salad-mix cuts or full head harvest. High resistance to DM and TB, slow bolting, and with overall disregard for temperature extremes. Frank describes this new "Jack of all salad trades" best: "Crisp as frost, freeze and heat tolerant, resistant to SC, great mild taste, a very good lettuce." ①

A=1g, $2.10 **B**=4g, $6.00 **C**=14g, $10.00 **D**=28g, $16.00
E=112g, $50.00

2922RI Red Iceberg (63 days) For burgundy exterior coloration, compact medium-sized heads, great reliability and pleasing sweet flavor, an attractive alternative to green iceberg. Interior shades to green. Heads resist getting soft and mushy in the heat for a relatively long time. ②

A=1g, $2.20 **B**=4g, $6.00 **C**=14g, $11.00 **D**=28g, $20.00

2924CO Crispino OG (60-65 days) Lettuce master Frank Morton said, "Ozzie and Harriet salad of my youth is making a comeback, and this is the backbone for it." This old-school iceberg gets right to business making 6–7" light green icy heads with nearly white hearts. Its lightly toothed and wavy leaf wraps early on a big vigorous 15–20" diameter plant, delivering a classic medium-crisp kick paired with tender juicy refreshment. In our hot humid 2018 lettuce trial, Crispino was uniform and blemish-free, holding well without tip-burn. ① **NEW!**

A=1g, $2.70 **B**=4g, $8.00 **C**=14g, $20.00 **D**=28g, $32.00
E=112g, $105.00

2931WW Webb's Wonderful (72 days) Introduced 1890 by Clarence Webb in England, came to us via Seed Savers curator M. Schultz. Webb's remarkable large-veined lightly savoyed dark-green leaves slowly form a very large crisphead with an exceptional buttery mild flavor like a butterhead. In our 2018 trial, it stood the heat well, bolted reluctantly, and didn't get bitter. Debby Jaffe of Long Days Farm in Buskirk, NY, also recommends it as a fall lettuce. Delicious for grazing—it's hard to resist harvesting leaves long before heads form. ②

A=1g, $1.50 **B**=4g, $2.10 **C**=14g, $3.50 **D**=28g, $5.00
E=112g, $11.00 **K**=448g, $34.00

SPECIALTY LETTUCES

2715LO Balady Aswan OG (45 days) An ancient form of native Egyptian celtuce that is customarily allowed to bolt and enjoyed for its 12–14" crunchy stems with creamy flavor. Its sweet emerald-green leaves are a bit pointy. They make a tall rosette, taste like regular lettuce leaves without bitterness and can be harvested anytime, remaining sweet and crispy like **2731** (p. 37) Cracoviensis even after bolting. Aswan began bolting only 3–4 weeks after its June 17 transplanting. Frank Morton says celtuce was a symbol of virility in ancient hieroglyphs but we make no unsubstantiated claims for this unusual lettuce. ①

A=1g, $2.70 **B**=4g, $8.00 **C**=14g, $16.00

Mâche: see Greens, p. 29

Varieties organized within sections by days to maturity.

Hi Fedco friends!!!! Thank you for holding down the planet for us!
– Jane Levison, Brooklyn, NY

Cucumis melo

~30-35 seeds/gram, with exceptions noted.

Culture: See the sidebar next page for additional cultural instructions. Melons produce the highest sugars when daytime temperatures exceed 80˚ and nighttime temperatures are 60–75˚.

Minimum germination soil temperature 60˚, optimal range 75–95˚.

Days to maturity are from date of transplanting.

Diseases: a number after the abbreviation indicates which race of pathogen.

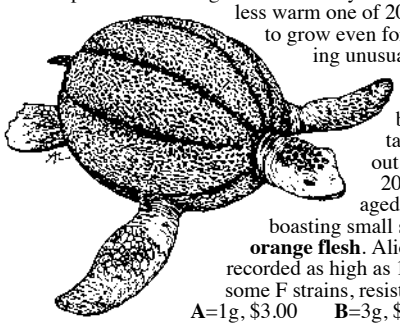
F Fusarium
PM Powdery Mildew
PRSV Papaya Ring Spot Virus
WMV Watermelon Mosaic Virus
ZYMV Zucchini Yellows Mosaic Virus

For Watermelons, see pp. 74-75.

MUSKMELONS

1 gram packet, about 20 seeds, sows 7 hills. Muskmelons are usually heavily netted and deeply ribbed with larger seed cavities than cantaloupes. They are easier and require less heat to grow well than cantaloupes.

970HL Halona (74 days) F-1 Hybrid. Often the earliest muskmelon to vine-ripen for us—Aug. 11 in the very warm 2012 season, Aug. 23 in the less warm one of 2014. Dependable, early and easy to grow even for the melon-challenged, delivering unusual sweetness and muskiness, full flavor with little compromise for the earliness. Enjoys a broad range of geographic adaptation. Achieved a 3.4 taste rating out of a possible 4 in Alice Coyle's 2012 trial. The 6" oval fruits averaged 2.8 lb for Alice and 3.0 for CR, boasting small seed cavities around thick sweet **orange flesh**. Alice's tested at 9.4 Brix, but it has recorded as high as 14–15 in other trials. Tolerant to some F strains, resistant to PM. ②



A=1g, $3.00 **B**=3g, $8.00 **C**=15g, $29.00

974MO Magnificenza OG (78 days) F-1 hybrid. We give this classy, dark-sutured and netted OG hybrid high marks for truth in advertising. At our first melon tasting of 2014, second-early Magnificenza far exceeded early standard Halona. Full-bodied caramel and cantaloupe sweetness was balanced with a bold shot of perfumed musk. Expect Brix levels of 12 to 15. Such **bright orange flesh** and smooth but solid texture is rare in short-season muskmelons. In a productive week, we picked 14 slightly oval 2–4 lb fruits from 3 hills. All blushed peachy-tan when nearing full slip, with only one flavor dud in the harvest. Very good resistance to F, PM and melon aphids (a dry climate plus). Sold by seed count. ④

A=15 seeds, $4.50

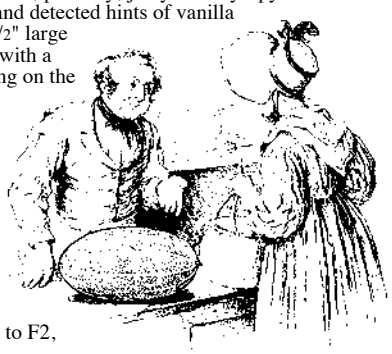
975TH Athena (80 days) F-1 hybrid. This muskmelon ripens early with nice **orange interior color**, good sweetness and not a hint of muskiness. Oval-round well-netted lightly ribbed fruits average 2½–4 lb. An excellent shipper, recommended for commercial growers. 11.0 Brix in OSU trials. Second-best yielder among 10 melons in a University of Maine trial. No sales to South Carolina. Tolerant to F0-2 and PM1-2. ~25 seeds/g. ⑥

A=1g, $4.50 **B**=3g, $12.00 **C**=15g, $40.00

977CU Sugar Cube (80 days) F-1 hybrid. While the breeder's promo uses all caps to shout muskmelon Sugar Cube's supreme disease resistance, our exclamations exalted the good yield, endearing small size, and flavor that's "just wow!" as one tongue-tied but satisfied staff member put it. At 4" diameter, this 1½ lb near-globe with light but entire corky netting fits easily in the hand and is ideal for going halfsies. The thick deep **orange** succulent flesh zings like musky candy. "So sweet and heavenly!" said a taster; "Ditto," uttered the next stunned eater. Finally, the loss of Seminis/Monsanto's French Orange can be forgotten. High resistance to PM1-2, F0-2, ZYMV, PRSV, WMV. ② **NEW!**

A=15 seeds, $2.40
B=60 seeds, $8.00
C=180 seeds, $16.00

979HC Hannah's Choice (85 days) F-1 hybrid. Hannah is my hands-down choice in Zone 5, for ease, appearance and flavor in hybrid muskmelons. Farther north, in Zone 4, its eating quality has been more variable. Nikos, our purchaser, likens its flavor to the tropical fruit cherimoya "custard apple"—smooth, perfumy, juicy with syrupy sweetness. Other tasters found it caramelly and detected hints of vanilla and coconut flavor. The 6½ x 5½" large netted oval fruits average 3–5 lb with a high Brix rating of 13. As stunning on the inside as it is imposing on the outside, its rich green rind contrasts with the **deep orange flesh**. Kudos to the Cornell University breeding program for developing this gourmet melon. At trials in both Freeville and Jamesport, NY, it had 96% marketable fruits by weight, besting Delicious 51 and Athena in color, depth, Brix and overall quality. Resistant to PM, tolerant to F2, ZYMV, PRSV, WMV. ②



A=1g, $3.50 **B**=3g, $9.00 **C**=15g, $35.00

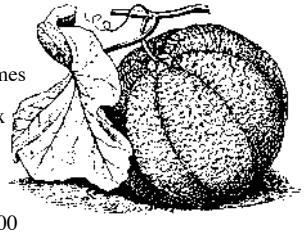
980GG Golden Gopher BD (85 days) Open-pollinated. This is one gopher I won't be without. Each year it reminds me just how good a melon can be. Though, as usual, they didn't look too imposing from the outside, the two I harvested on Sept. 3 blew me away with their flavor. The 6" heavily ribbed fruits averaging 2½ lb feature **deep orange flesh** of superb eating quality. Gopher's Honeydew parentage helps account for its high sugar content as well as its resistance to F. Developed by the University of Minnesota in the 1930s and introduced by Farmer Seed & Nursery Co. in 1939, saved from probable extinction by Glenn Drowns, discovered and multiplied by our trialer Jeanne Griffin, and popularized by Jack Kertesz at his MOFGA gardens. Called "Pop Open" melons because they sometimes split open when ripe. Very susceptible to PM. ②

A=1g, $2.00 **B**=3g, $4.00 **C**=15g, $8.00

984PO Pride of Wisconsin OG (88 days) The best full-sized open-pollinated muskmelon. CR's first fruit, harvested vine ripe on Sept. 3, a flawless 5.56 lb specimen, was the highlight of his 2016 growing season, confirming Pride's place at the pinnacle of heirloom melons. It was melon nirvana: its superb smooth texture and juicy refreshing sweetness satisfying through and through with just the right delicate balance and no musky aftertaste. High-quality large oval **salmon-fleshed** 5–7 lb fruits have coarse netting and compact seed cavities. Edible all the way to the rind. Tends to crack at the blossom end during wet seasons so not recommended for long-distance shipping. Known as Queen of Colorado when it was introduced in 1923 by the St. Louis Seed Co. Offered in the '40s and '50s by Burpee and Eastern States Cooperative. All but disappeared from the trade after the onset of hybridization, maintained by a handful of seed savers. ②

A=1g, $2.20 **B**=3g, $6.00 **C**=15g, $10.00 **D**=30g, $18.00

985DL Delicious 51 (88 days) Open-pollinated. Among the best widely available open-pollinated muskmelons for cold climates. Distinctively ribbed with sparse netting, its sweet 3 lb fruits turn yellow and are sometimes soft when ripe. **Dark orange interiors** with sweet juicy aromatic flesh. Received 11 Brix reading at Oregon State University trials. Developed by Dr. Henry Munger of Cornell University in 1953. *Likely to be our last year offering*. Resists F, PM. ②



A=1g, $1.70 **B**=3g, $3.00 **C**=15g, $5.00

986MO Montreal Market OG (89 days) Open-pollinated. Also known as Montreal Nutmeg, the best argument going for maintaining gene banks. Believed extinct, it was saved by Montreal cultural preservationists who finally located a few seeds in the USDA Ames, IA, repository in 1996. This very rare legendary **green-fleshed** muskmelon was once widely grown in Canada, New England and the Upper Midwest. Hedrick in *The Cucurbits of New York* asserted that "handled skillfully and intelligently produces the largest fruits of its type in American cultivation," sometimes reaching 20 lb. With an exotic sweet spicy flavor as unique as its size, these became the summer dessert of choice in New York's Waldorf Astoria, Boston's Ritz and other stylish hotels, fetching growers as much as $30 per dozen in 1921, and costing more per slice than most steaks on the menu. Though commercialized by Burpee in 1881, its roots trace back to the early French settlers. Widely grown on the western edge of Montreal in Zone 5b, it gradually disappeared after World War II as expansion and an expressway swallowed up rich agricultural land and tastes shifted away from green-fleshed melons. Its thin rinds, large size and inability to store long also dampened its success. Intricately netted and prominently ribbed, the aromatic fruits have a silky texture and a spiciness reminiscent of nutmeg or ginger. Regular moisture and use of horse manure are said to be the secrets to good growth. In zones and microclimates other than Montreal's more likely to grow 4–5 lb. ①

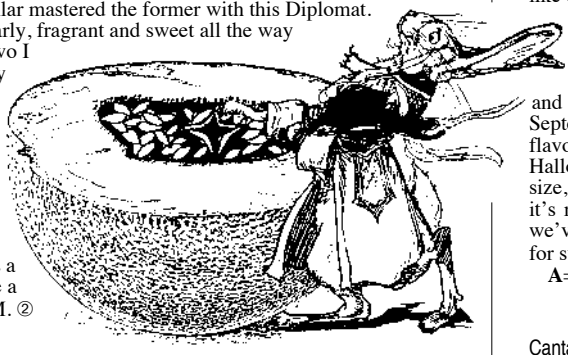
A=1g, $2.40 **B**=3g, $6.00 **C**=15g, $11.00 **D**=30g, $20.00

GALIA-TYPE MELONS

The name Galia is the feminine form of the Israeli name *Gal* (meaning 'wave'). Developed in Israel around 1970 by breeder Zvi Karchi, Galias feature smooth **lime-green flesh** and a sweet taste with tropical overtones. Typically the fruits have corky netting but no ribbing.

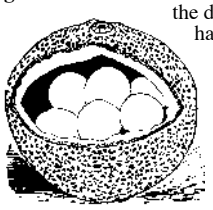
Culture: Pull from the vine when the skin blushes yellow, at full slip.

954DP Diplomat (76 days) F-1 hybrid. Vine-ripening Galia melons in the North and discerning just when to bring them in used to be a challenge comparable to practicing diplomacy in the Middle East. While the latter remains intractable, Hollar mastered the former with this Diplomat. These 5+ lb fruits are early, fragrant and sweet all the way down to the rind. The two I harvested on the last day of August were delectable. Diplomat is easy to grow and easy to tell ripeness. It blushes yellow and slips off the vine. Enjoy this incomparable **green-fleshed cantaloupe**. Who needs a Passport when you have a Diplomat? Tolerates PM. ②



A=1g, $2.80
B=3g, $6.60
C=15g, $26.00

958AO Arava OG (80 days) F-1 hybrid. Some years back, during a spring trip to Israel, CR visited Genesis Seeds, the producers of this stellar **green-fleshed** melon that is named for the long valley that traverses much of the desolate Negev Desert in southern Israel. Though it is hard to believe that anything will grow in such a place, these Arava melons are the signature Israeli variety found in all the markets. A welcome relief there at the edge of the desert, where stepping outside mid-morning in April feels like entering a blast furnace. Unsurprisingly, he developed quite a taste for these sweet refreshing fragrant **cantaloupes.** Smooth, no ridges, lightly netted, blemish-free and uniform. In 2012, Alice Coyle harvested 12 fruits from four plants, averaging 1.56 lb each that tested 10.9 Brix. Will grow larger in a warmer climate. Resistant to PM. ③



A=1g, $3.00 **B**=3g, $6.00 **C**=15g, $28.00

ANANAS TYPE

Originating in the Mideast, Ananas is a type of white fine-fleshed netted muskmelon that develops considerable sweetness along with a hint of spiciness in summer heat.

916DV Dove (70 days) F-1 hybrid. I was shocked and awed to harvest a vine-ripe melon on Aug. 6, my earliest ever. In all, I picked five averaging 2.9 lb. That same season, Fedco staffer Alice Coyle ripened fourteen fruits in the first nine days of August and concluded, "I love Dove. So do my restaurant buyers." Dove may be the earliest, easiest and sweetest melon you will ever grow. The **ivory-colored flesh** with tropical fruity overtones has tested as high as 15.5 on the Brix sweetness scale. The greenish-orange skin shows scant netting and blushes as the fruits ripen. After harvesting let them sit 3–4 days to bring out their full flavor. So early, a candidate for succession plantings. Short shelf-life, not for long-distance shipping. ②

A=1g, $4.50 **B**=3g, $12.00 **C**=15g, $45.00

Most Years You *Can* Vine-Ripen Melons In Maine

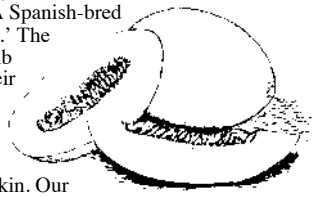
Melons are a tender crop with high nitrogen requirements. They love heat, cannot stand frost, and may be damaged by night temperatures below 40˚. Though they require some extra fussing, the results are sure worthwhile.

- Note days to maturity and select varieties that will ripen in your climate. Dove, Alvaro, Diplomat, Halona are surest bets.
- Start indoors in early May (later if the spring is slow to warm) in pots, 2-3 seeds to a pot. Melons resent transplanting but will take if their roots are not disturbed.
- Prepare hills or rows in advance with liberal amounts of well-rotted manure or compost. Don't place melons next to crawling plants like cucumbers, gourds or winter squash. Space rows 6-8' apart, plant melons about 2' apart, watermelons 3-4' apart.
- A cold start can permanently stunt growth, so wait for a warm spell after all danger of frost to transplant, usually between May 20th and June 20th. Water heavily and, if soil is dry, lay a temporary mulch until a soaking rain comes.
- Melons are more sensitive than squashes so use low tunnels with floating covers that do not abrade plants. If you have sandy soil, check daily and irrigate when needed.
- Use blue, black or clear plastic mulch between plants.
- Use a foliar feeding program to speed ripening.
- Remove row covers before buds open. Replace them when you don't desire any more fruit to set.
- To reduce rot loss, rotate ripening melons occasionally. To reduce mouse damage, place ripening melons on bricks.
- Inspect your patch *daily* at ripening time. Check fruits for aroma and color and *pull gently* on those that appear to be ripe. Most muskmelons are ripe when the pressure causes them to slip from the vine.

CANARY TYPE

Named for their distinctive yellow skin, canary melons have white interior flesh.

927MM Mayor (85 days) F-1 hybrid. A Spanish-bred canary whose name translates to 'bigger.' The blocky oblong deep golden-yellow 4–6 lb fruits with **white flesh** feel heavy for their 8–10" x 5–6" size. Mayor is not a crunchy "meh" grocery canary, but a ripe-honeydew-and-creamy-crenshaw-like combo. Unlike other canary types, few furrows mar Mayor's smooth skin. Our staff says of Mayor: "Like a sorbet," "So smooth, amazing texture," "Essence of a flower, honey sweet" and "Buttery, tastes like candy." Good market-worthy yields in Maine of all places, and best of all, over several seasons, Heron reports picking Mayors in early September and storing them at room temperature until November. While the flavor does fade some, "cutting into a good homegrown melon on Halloween is pretty awesome." Mayor does not slip from the vine. Good size, full color, and slight give to finger pressure on the blossom end mean it's ready to pick. Luckily, Mayor resists split ends better than any canary we've grown. Transplant only. Plastic mulch and row cover are *de rigueur* for success in the open field in the north. ~25 seeds/g. ④

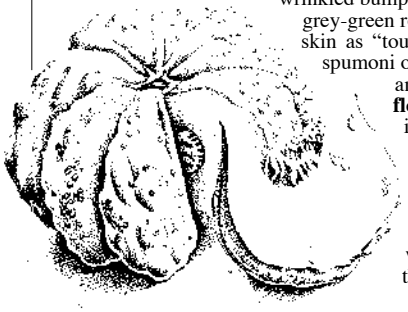


A=15 seeds, $5.00 **B**=60 seeds, $15.00 **C**=150 seeds, $30.00

CANTALOUPE

Cantaloupes, named for the papal gardens of Cantalupo, Italy, where some historians say the first cantaloupe was grown, are smooth-skinned or lightly netted with few ridges. Some are warted. Blushing skin color and a whiff of perfume are usually telltale signs of ripening.

943FO Prescott Fond Blanc OG (88 days) Open-pollinated. *Fond Blanc* translates to 'white bottom.' Don't be fooled by the outer appearance of this wrinkled bumpy warted thick-skinned puffy-looking grey-green rock melon! (One author describes the skin as "tough as rhinoceros hide.") Looks like spumoni on the inside, the outer layers of green and yellow giving way to **deep orange flesh** in the center. Then oo-la-la! Sniff its rich bouquet and bite into the juicy melting dense savory flesh. As Prescott's 3–5 lb true cantaloupes ripen they develop a yellow blush and a floral redolence, and finally slip off the vine with light pressure when fully ripe. Bring them in and let them sit for a week, then enjoy! Fruits ripen variably, vines keep producing, averaging about four melons per hill. ②



A=1g, $2.40

CHARENTAIS

This French melon is a true **cantaloupe**, almost smooth with no netting. Green skins blush yellow-tan when ripe; fruits emit a memorable redolence. Harvest at half-slip (they pull off with a moderate tug) and bring inside for a day or two for best flavor. Don't wait till full slip—they'll be over-ripe.

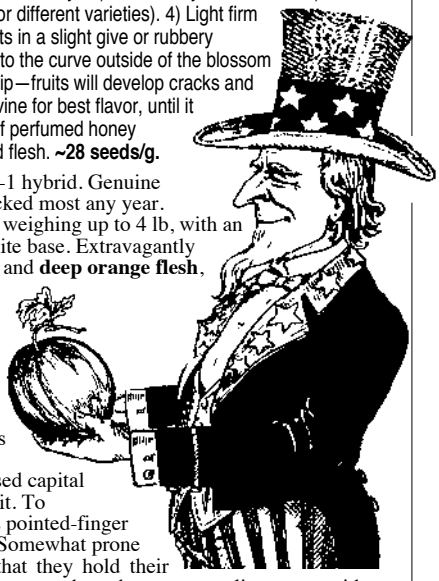
948AV Alvaro (77 days) F-1 hybrid. A class of **cantaloupe** notoriously slow to ripen and difficult to harvest ripe without splitting, the ideal Charentais eluded our trialers for years until Heron found Alvaro. Heron calls it the Halona of Charentais melons because his, so early, matured around the same time as Halona in 2013. CR's, first ripening on Sept. 4, 2014, the day after his French Orange and twelve days after his first Halona, were still way earlier than any other Charentais he had ever tried. Almost as if sculpted, grey-green Alvaro shows remarkable uniformity. All 5 fruits, averaging 2.28 lb, ripened within a 3-day window, none splitting or showing any other damage. Even in water-bursting 2013, Heron had nary a split. Deeply sutured 5x6" fruits without netting fill the room with that incomparable Charentais aroma. Thick **orange flesh** luscious and succulent with silky but firm texture and rich full-bodied flavor—everything we've wanted in a Charentais but not found since French Orange. Sold by seed count. ④

A=15 seeds, $4.00
B=60 seeds, $14.00
C=180 seeds, $30.00

Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

HONEYDEW MELONS

Harvest tips: Discerning ripeness in honeydews is an art. At least two or three of the following signs should align before you cut fruit from the vine: 1) Fruits are free of fuzz or minute hairs that denote immaturity. 2) Stems dry at tendrils. 3) Fruits assume proper coloration (different for different varieties). 4) Light firm pressure applied to fruit bottom results in a slight give or rubbery rebound (pick soon). Give extends into the curve outside of the blossom scar (pick now). Do not wait for full slip—fruits will develop cracks and get over-ripe. Cure 1–4 days off the vine for best flavor, until it develops a very subtle sweet smell of perfumed honey indicative of melting juicy full-flavored flesh. **~28 seeds/g.**



963US Uncle Sam (78 days) F-1 hybrid. Genuine sweetness and among the first picked most any year. Perhaps the largest of the earlies, weighing up to 4 lb, with an alluring yellow wash over the white base. Extravagantly perfumed. Besides its solid musk and **deep orange flesh**, combines a great muskmelon texture and flavor with the sweetness of a honeydew. "Nice and creamy like sorbet," raved one of our tasters. Healthy productive disease-resistant plants. Trialer Alice Coyle, whose nine fruits from four plants averaged 3.2 lb and achieved an outstanding 13.9 Brix average, used capital letters in her demand that we list it. To paraphrase Alice and that famous pointed-finger slogan, "You want Uncle Sam!" Somewhat prone to cracking, but Aktan reports that they hold their firm texture and creamy flavor even when they get a split on one side. Resistant to F0-2 and PM. ④

A=1g, $4.00 **B**=3g, $11.00 **C**=15g, $50.00

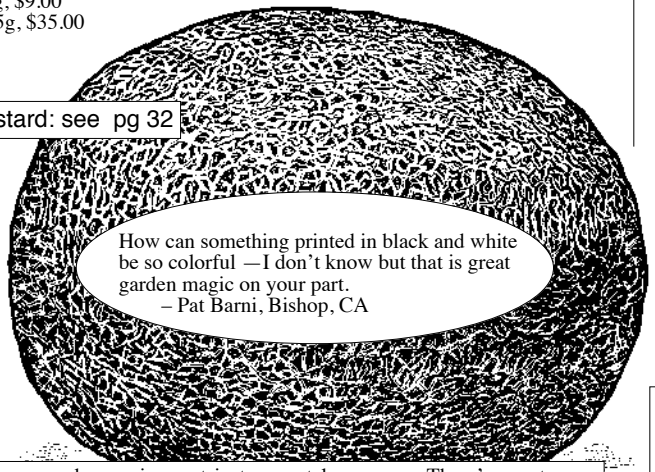
968WH White Honey (80 days) F-1 hybrid. "Like eating the scent of a flower." Our tasters praised the pearly, almost translucent flesh of these juicy melons as mild and attractively sweet with a slight floral undertone. Heron's earliest and most productive melon in 2010, (under row cover and with both black plastic and irrigation, his harvest began August 15) and the first among 20 varieties to ripen for Alice Percy, starting on July 29, 2012. From four plants Percy harvested 20 of the oblong/oval melons over a long period. Fruits average 2.1 lb and received a high taste rating of 3.8 out of 4. Ripe when the skin turns from white to deep ivory and emits an addictive perfume. Keeps well for at least five days off the vine. ③

A=1g, $2.20 **B**=3g, $5.30 **C**=15g, $18.00

SENSATIONAL MELON

996SS Sensation (85 days) F-1 hybrid. Bested Seminis-bred French Orange at a memorable late-August staff melon taste-off, motivating both Susan Kiralis and Bria Sanborn to grow melons for the first time. CR was not present, but he later joined the Sensation fan club when it became the first melon to vine-ripen for him on Aug. 27 and 31. Very sweet, but not cloying, with perhaps the highest Brix of any melon in the catalog. Complex, too, with haunting hints of hazelnut, amaretto and cinnamon. Very unlike French Orange, and not fitting into any of the usual classes of melons, Hollar's Sensation generates sparsely netted 2–4 lb fruits with very small seed cavities surrounded by glistening **white flesh.** As they ripen, their buff skin becomes burnished with an orangey-yellow haze and they readily slip from the vine. Brought indoors, they fill the room with their enticing fragrance. Resistant to F0-2 and PM. ②

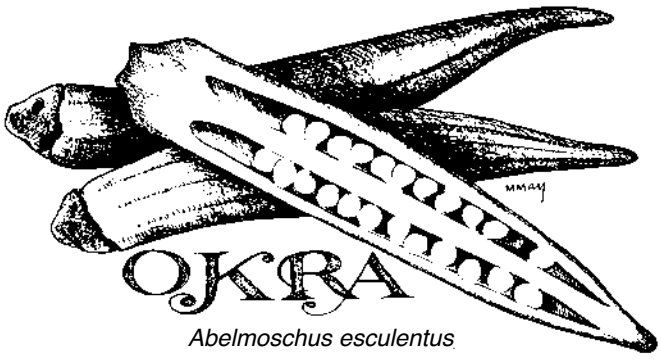
A=1g, $3.50
B=3g, $9.00
C=15g, $35.00



Mustard: see pg 32

How can something printed in black and white be so colorful —I don't know but that is great garden magic on your part.
– Pat Barni, Bishop, CA

Growing a seed crop, in most instances, takes a year. There's one try per season to get it right, to learn from mistakes. As an older seed farmer was heard to say to a younger seed farmer, "I've got 30 tries left."



Abelmoschus esculentus

~10–15 seeds/g. 2 gram packet contains about ~20–30 seeds.

Culture: Direct seed or start indoors in peat pots and transplant in 4–5 weeks, after all danger of frost has passed. Transplant 1' apart; do not disturb roots. Once it flowers, the fleshy pods will be ready for harvest in two days. They are best when picked young and tender, no longer than 4". Longer pods are really fibrous.

State legislator Craig Hickman of Annabessacook Farm in Winthrop, who grows 400 plants per year, says okra requires TLC, balanced nutritious soil with good pH, and not much competition from weeds. According to one of his veteran fieldhands, "Okra is a diva…that needs hot weather for about 60 days."

Minimum germination temperature 60˚, optimal range 70–90˚.

Days to maturity are from date of transplanting, not seeding.

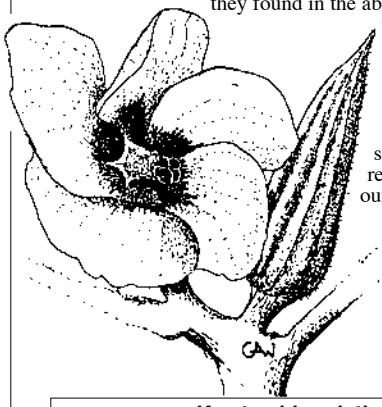
3695JO Cajun Jewel OG (65 days) Open-pollinated. A bayou favorite since the 1950s, Cajun Jewel adapts well to our cooler climate and produces almost as much as hybrid Cajun Delight. Dwarf spineless 3–4' plants yield relatively early 1x7" pods with good flavor. Southern Exposure Seed Exchange introduced this Jewel to commerce in 1989. ①

A=2g, $1.80 **B**=4g, $3.00 **C**=28g, $9.00 **D**=112g, $24.00
E=448g, $85.00

3697GO Red Burgundy OG (75 days) Open-pollinated. This dual-purpose cultivar is a stunning ornamental as well as a culinary delight. Although most productive in the south, Red Burgundy is hardy enough to generate at least a few pods here. Slender pods will grow 6–7" but are best harvested at 4" for optimal texture and flavor. Our trialer Relentless says they "taste as good as any green okra." Later and not as productive here as Cajun Jewel, but an absolute stunner with its green leaves and burgundy ribs, stems and pods. Bred by Leon Robbins at Clemson University. ③

A=2g, $1.60 **B**=4g, $2.30 **C**=28g, $3.60 **D**=112g, $11.00

3699BO Beck's Big Buck OG (85 days) Open-pollinated. When Malcolm and Delphine Beck bought their farm in 1968 in Comal County, TX, they found in the abandoned garden giant okra stalks with the fattest pods they'd ever seen. They saved and replanted the seed, and it grew big fluted remarkably tender delicious green pods in abundance on sturdy plants. They called it the snapping okra because it snaps so easily off the plants when it is ready to harvest. Though not adapted to our climate, Beck's will produce even in central Maine in an average growing season. Of course, it will do much better farther south. ①②



A=2g, $1.80 **B**=4g, $3.00
C=28g, $9.00 **D**=112g, $20.00

Key to abbreviations and symbols

OG after cultivar name = entire lot is certified-organic seed.
ECO after cultivar name = entire lot is sustainably grown seed.
BD after cultivar name = entire lot is biodynamically grown seed.
PVP = Plant Variety Protected.
AAS = All-America Selection.
BR = Breeder Royalties apply. Please see page 106 for more info.
IR = Indigenous Royalties apply. Please see page 106.
❄ = cold-hardy through at least part of the Maine winter. See page 27 for more information.
☙ = a variety introduced by Fedco followed by the year first offered.
Ω = a variety grown and supplied by the plant breeder. More on page 36.
✿ = a variety especially attractive to pollinators.
~ = approximately

Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

ONIONS *Allium cepa*

~200–250 seeds/g, ~6000–7500 seeds/oz.

Culture: Start onion seeds indoors in February or March. We discourage using bottom heat because onions germinate poorly in soil temps above 70˚. Transplant in spring soon after the ground can be worked. Set seedlings out 1–2" deep and 6–8" apart in shallow trenches, 1–2' between rows. Onions are heavy feeders and want generous amounts of organic matter, fertilizer and lots of water. Late transplanting and poor fertility can result in small onions or failure to form bulbs. Onions are notoriously intolerant of weeds. Slugs love to munch allium seedlings, and in areas above 40˚ latitude, root maggots may attack onion roots.

Onions are day-length sensitive. In the north, the earlier onions are set out, the more chance they have to make top growth while the days are lengthening. The more top growth, the greater the bulb size. After summer solstice they begin bulbing. Onions survive light frosts.

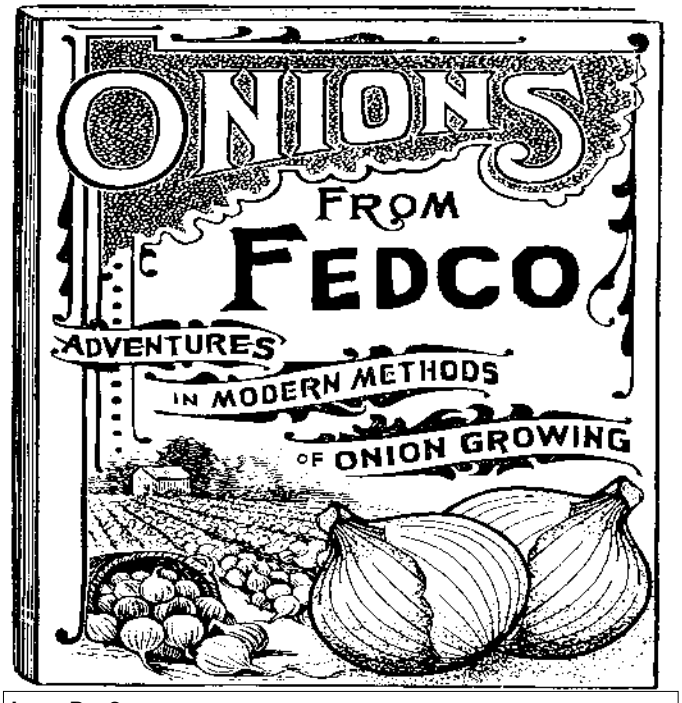
After half the onion tops fall, push over the remainder and harvest within a week. Field-cure in the sun about 10 days until dry, covering with a tarp in wet weather. In the event of extreme heat or prolonged damp conditions, we recommend sheltered curing in a well-ventilated barn or greenhouse. Curing is essential for long storage. Store cured onions in mesh sacks in a cool dry well-ventilated place, periodically removing sprouting or rotting bulbs. When it begins to warm up in spring, put your remaining onions in the fridge to extend storage. This should get you through until your new crop is ready.

Minimum germination temperature 50˚; optimal range 60–70˚.

Days to maturity are from date of transplanting, not seeding.

Diseases: DM Downy Mildew PB Purple Blotch PR Pink Root

About allium seed: We do not hold over hybrid onion seed because of precipitous decreases in germination. Onion and leek seed is short-lived. Test 1-year-old seed before using. Discard anything older.



Long Day?

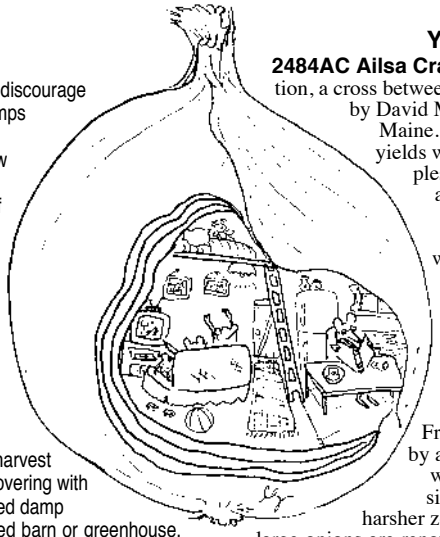
Onions are triggered to form bulbs properly in response to a particular day length. Day length differs depending on latitude, so different onion varieties were developed to have different day-length needs.

All the varieties we list are suitable for northern growers. Those living farther south may want to note our latitude specifications at the end of each description.

Long-day: Must be north of 36˚ latitude, though some long-day types perform best north of 40˚. These onions need 14–16 hours of sun a day to trigger bulb formation. As well as needing long days, these varieties may not perform well in continually hot soil temps.

Intermediate-day: Also called **day-neutral** onions, generally need 12–15 hours of daylight to bulb. Some can do well in parts of the upper southern U.S. all the way up through Maine. Others are best for mid-latitudes only (35–40˚). All intermediate-day onions in our catalog have performed well repeatedly in our Maine trials.

Short-day: These are onions suited for the South, below latitude 36°, bulbing when the day length measures between 10–12 hours. We don't offer short-day varieties.



YELLOW SUMMER ONIONS

2484AC Ailsa Craig (110 days) Open-pollinated. Also known as Exhibition, a cross between Danvers Yellow and Cranston's Excelsior introduced by David Murray in 1887. Jason Kafka made this onion famous in Maine. Usually he produces tons of the 1–3 lb roots, achieving yields well in excess of 1 lb per row foot and production multiples that Wall Street can only dream about. Year after year astounding specimens are exhibited at Common Ground Fair. The enormous slightly oval pale straw-colored globes are sweet, mildly pungent and store but a short while. Adapted to 38-60˚ latitudes. ④

A=1/16oz, $2.80 **B**=1/8oz, $4.50 **C**=1/2oz, $16.00 **D**=1oz, $30.00

2498WW Walla Walla Sweet Spanish (125 days) Open-pollinated. "Join the funion and be part of the onion ring" is the slogan of the annual sweet onion festival celebrated in Walla Walla, WA, every June. Their signature sweet onion is said to have originated in the French island of Corsica and been brought to Washington by a French soldier. It became famous in the Pacific Northwest for its juicy sweet flavor and has been in commerce since around 1900. In WA it can be wintered over. In our harsher zone it must be sown in the spring for fall harvest. These large onions are renowned for their mild flavor as soon as they come out of the ground. They do not store. Adapted to 35-55˚ latitudes. ①

A=1/16oz, $2.20 **B**=1/8oz, $3.60 **C**=1/2oz, $7.00 **D**=1oz, $12.00 **E**=4oz, $30.00 **K**=1lb, $105.00

YELLOW STORAGE ONIONS

2449YO New York Early OG (98 days) Open-pollinated. Superior strain of Early Yellow Globe selected for storage until early spring. New York Early was maintained by commercial onion growers in Orange County, NY. Very firm mild yellow onions may be eaten raw in salads or sandwiches. They average 2 1/2–3" across with a taste like Copra and storage only slightly shorter. "My fave, sweet & tender," praised one of our tasters. Ours rates as the best strain in an independent evaluation. Adapted to 38-50˚ latitudes. ①

A=1/16oz, $2.60 **B**=1/8oz, $4.20 **C**=1/2oz, $9.00 **D**=1oz, $16.00 **E**=4oz, $56.00 **K**=1lb, $200.00

2454EX Expression (98 days) F-1 hybrid. The testimonials poured in when we threatened to drop this curiously named onion. Now that you have expressed yourselves, we'll keep this nice big juicy sweetie around. "As large and flavorful as Candy with better disease resistance," said Anne Nordell of Trout Run, PA. "Wow, we had some that weighed almost 1.5 lb apiece…I haven't been able to eat any onions raw for years, but I was delighted to find that these did not bother my stomach at all," chimed in Janine Welsby. Short to medium storage, decent heft (the large light brown globes average about 12 oz) and flavor. Bred by Bejo for high yields in rich clay loamy soils in the Northeast and PA. PR-tolerant. Adapted to 32-45˚ latitudes. ④

A=1/16oz, $3.30 **B**=1/8oz, $5.20 **C**=1/2oz, $18.00 **D**=1oz, $34.00 **E**=4oz, $125.00

2472PT Patterson (104 days) F-1 hybrid. Two years ago we wondered which would be worse: losing Obama as president or losing Copra onion? The answer couldn't be clearer. From our field trials and from feedback from staff farmers, blocky-globed rusty-bronze–skinned Patterson has emerged as Copra's worthy heir apparent. At 1.3 lb average Patterson is larger and more uniform, equaling the biggest of the more size-variable Copras, and Patterson's healthy necks sit down earlier. We slightly preferred Copra's flavor both raw and cooked right out of the field, but after storage the gap narrowed, with Patterson edging out Copra raw, but not quite as good as Copra cooked. We saw no storage difference between the two in a winter test. If only we could have elected an onion to the highest office in the land. Adapted to 38-55˚ latitudes. ④

A=1/16oz, $3.00 **B**=1/8oz, $5.00 **C**=1/2oz, $17.00 **D**=1oz, $30.00 **E**=4oz, $112.00 **K**=1lb, $430.00

2474DO Clear Dawn OG/BD (104 days) Open-pollinated Clear Dawn was bred out of Copra and introduced by Beth and Nathan Corymb of Meadowlark Hearth after being entrusted to them by biodynamic growers Claire Hall and Don Jason. The best open-pollinated storage onion, Dawn has gotten better and better over years of selection with great storage capability. 8–10 oz average and very hard. Adapted to 38-50˚ latitudes. Certified biodynamically grown. **BR** ①

A=1/16oz, $2.40 **B**=1/8oz, $4.20 **C**=1/2oz, $14.00 **D**=1oz, $22.00 **E**=4oz, $70.00

Thank you! Your seeds will feed many seniors and families in our inter-generational garden. We look forward to starting soon.
– Alexandra Turner, Lancaster, MA

more Yellow Storage Onions

2477BC Borrettana Cipollini (105 days) Open-pollinated. Sweet, dependable, easy to handle and delectable, this Italian heirloom is the quintessential boiling and braising onion. Shaped like a button, up to 4" wide (normally 3") but less than 1" thick. Flattened spheres with bright shiny golden skin. Fine-grained mild flesh with a well-developed flavor. Appreciated in soups, stir-fries and shish kebab. Braids beautifully and keeps till late winter. Adapted to 38-50° latitudes. ②

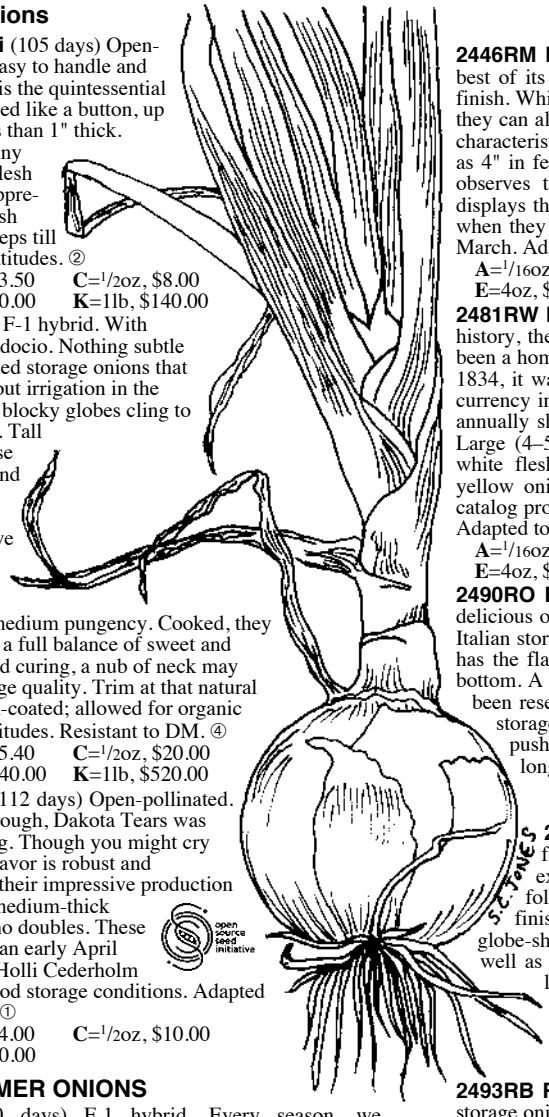
A=1/16oz, $2.20 **B**=1/8oz, $3.50 **C**=1/2oz, $8.00 **D**=1oz, $13.00 **E**=4oz, $40.00 **K**=1lb, $140.00

2487TO Talon OG (110 days) F-1 hybrid. With tremendous Talon comes braggadocio. Nothing subtle about these bronze-brown–skinned storage onions that averaged almost 2 lb, even without irrigation in the 2016 drought. Very uniform tall blocky globes cling to the ground during active growth. Tall disease-resistant tops mirror those strong roots. Besting Patterson and Copra in 50° storage, our Talons stayed rock hard with no sprouting until mid-May when we finished eating them before discovering their full storage potential. Raw, the flavor starts sweet and builds to a lingering medium pungency. Cooked, they stay firm but succulent; Talon is a full balance of sweet and allium tang. After dying back and curing, a nub of neck may remain that does not affect storage quality. Trim at that natural point of attachment. Seed is film-coated; allowed for organic prodction. Adapted to 38-50° latitudes. Resistant to DM. ④

A=1/16oz, $3.50 **B**=1/8oz, $5.40 **C**=1/2oz, $20.00 **D**=1oz, $38.00 **E**=4oz, $140.00 **K**=1lb, $520.00

2489DO Dakota Tears OG (112 days) Open-pollinated. Dave Podoll's breeding breakthrough, Dakota Tears was more than 20 years in the making. Though you might cry when you cut one open—their flavor is robust and oniony—you won't weep about their impressive production of very hard yellow bulbs with medium-thick necks averaging 1 lb each with no doubles. These matured in late September from an early April start and stored well for Dyrek. Holli Cederholm says hers keep till May under good storage conditions. Adapted to 38-50° latitudes. ☘2009. Ω ①

A=1/16oz, $2.30 **B**=1/8oz, $4.00 **C**=1/2oz, $10.00 **D**=1oz, $18.00 **E**=4oz, $60.00



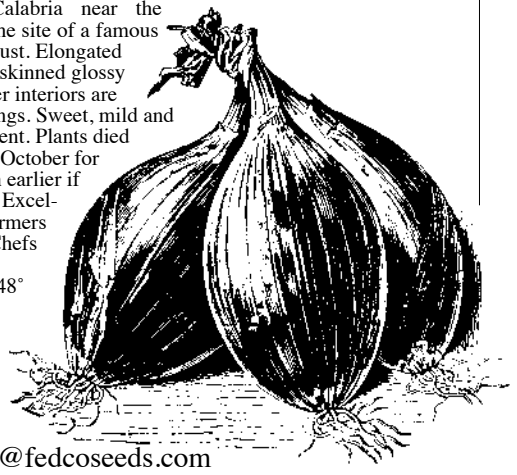
RED SUMMER ONIONS

2445CO Cabernet OG (90 days) F-1 hybrid. Every season, we northern-tier growers fret over the always-late red onions. Will they fully ripen, cure and keep? Cabernet released us from this worry with fancy red onions ready for fresh use and market in late July. By Aug. 9, two-thirds of the crop had lain down, a full week before New York Early began its descent. By Aug. 31, Cabernet was firm, cured and ready for 3–4 months storage. No shortcomings in this classy uniform early red. The 3 1/2" wide, 8 oz single-centered globes slice to the perfect size to top a large burger. Raw, the rings are many and thin, finely textured and crunchy, sweet and slightly spicy. Cooked, the excellent aroma and full sweetness will induce you to use them up long before they reach their storage limit. Adapted to 35-45° latitudes. ④

A=1g, $3.50 **B**=2g, $6.00 **C**=8g, $15.00 **D**=24g, $42.00 **E**=96g, $160.00

2485RT Rossa Lunga di Tropea (110 days) Open-pollinated. The famous Italian heirloom torpedo onion whose name means Long Red of Tropea. Tropea, in Calabria near the southern tip of Italy, is the site of a famous onion festival every August. Elongated like torpedos, these thin-skinned glossy maroon bulbs with lighter interiors are easily sliced into even rings. Sweet, mild and delicious for fall enjoyment. Plants died back in the first week of October for Donna Dyrek, will finish earlier if started indoors March 1. Excellent bunched fresh for farmers market in midsummer. Chefs love them for grilling or braising. Adapted to 35-48° latitudes. ②

A=1/16oz, $2.10
B=1/8oz, $3.60
C=1/2oz, $7.00
D=1oz, $11.00
E=4oz, $30.00



RED STORAGE ONIONS

2446RM Red Marble (95 days) F-1 hybrid. This hard red variety is the best of its kind. Alan LePage loves how hard they are and how fast they finish. While they can be closely spaced to grow 1–2" baby red pearl onions, they can also be spread apart to make full-sized onions 2–3" across with the characteristic Cipollini flat bottoms and thin necks. A few will grow as big as 4" in fertile conditions. Dark red penetrates deep into the rings. LePage observes that unlike yellow Cipollinis, they always sell well when he displays them at farmers market. "Their stony polished red skin just shines when they are fully finished." Excellent keepers, they store till February or March. Adapted to 38-55° latitudes. ④

A=1/16oz, $2.00 **B**=1/8oz, $3.60 **C**=1/2oz, $9.50 **D**=1oz, $18.00 **E**=4oz, $65.00

2481RW Red Wethersfield (110 days) Open-pollinated. Grow a piece of history, the onion that made the town of Wethersfield, CT, famous and has been a home-garden favorite for two centuries. First offered commercially in 1834, it was grown extensively for market in the 19th c. and even used as currency in the town. At the height of its onion commerce, Wethersfielders annually shipped more than 5 million lb to the South and the West Indies. Large (4–5" across) medium-firm purple-red flattened globes, pink-tinged white flesh with red concentric circles, have stronger flavor than most yellow onions. Keeps till late winter. The 1856 Comstock, Ferre & Co. catalog pronounced it "fine-grained, pleasant flavored and very productive." Adapted to 38-50° latitudes. ②

A=1/16oz, $2.10 **B**=1/8oz, $3.60 **C**=1/2oz, $9.00 **D**=1oz, $13.00 **E**=4oz, $32.00

2490RO Rossa di Milano OG (114 days) Open-pollinated. "The most delicious of all the onions I've grown," says Tom Vigue. This excellent red Italian storage onion is shaped like a buttercup squash without the button. It has the flat square-shouldered top tapering like a barrel to a narrower flat bottom. A few years ago our supplier lost this typical shape. Now Rossa has been reselected for three years by our stateside grower for both form and storage. Tops slow to go down. Encourage the recalcitrant ones by pushing them over. Takes a while in fall to dry. Very hard and keeps a long time, till May for Vigue. Adapted to 35-45° latitudes. ① **BACK!**

A=1/16oz, $2.70 **B**=1/8oz, $5.00 **C**=1/2oz, $17.00 **D**=1oz, $30.00

2491RW Redwing (116 days) F-1 hybrid. Jason Kafka's favorite onion, achieving an average size of 12–16 oz and yields in excess of 1 lb per row foot in good seasons. They like wet springs followed by warm or hot summers and plenty of nitrogen, usually finishing nicely in the 3rd week of September. Very hard globe-shaped 3–4" bulbs with deep purple-red glossy skin keep almost as well as Copra. Rated the ultimate red storage onion. Adapted to 43-65° latitudes. *Caution: because of its long season, may not grow well in some cool or coastal areas.* ④

A=1/16oz, $4.00 **B**=1/8oz, $6.60 **C**=1/2oz, $24.00 **D**=1oz, $46.00 **E**=4oz, $176.00

2493RB Red Bull (118 days) F-1 hybrid. No bull, Red Bull is one good storage onion. These ultra-hard large red globes will keep until May. Shinier and darker than Rossa di Milano and red through and through. 3–4" roots with strong tops average 8 oz. Donna Dyrek rates her Red Bull as very red, very big and very nice. Adapted to 43-65° latitudes. They are slow to quit growing and often won't sit until Oct. 1 so *may require too long a season for most of central Maine and areas farther north.* ④

A=1/16oz, $4.00 **B**=1/8oz, $6.60 **C**=1/2oz, $24.00 **D**=1oz, $46.00 **E**=4oz, $176.00

WHITE SUMMER ONIONS

2444CW Crystal White Wax (70 days) Open-pollinated. Unlike most onions, these can be direct-seeded in spring with the peas. Then the 1 1/2" pearly white bulbs ripen with the peas for early summer baby onions or pickles. Orbs the size of ping-pong balls were ready to harvest on July 7 in central Maine. Resists PR. ②

A=1/16oz, $1.80 **B**=1/8oz, $3.20 **C**=1/2oz, $7.00 **D**=1oz, $10.00 **E**=4oz, $18.00 **K**=1lb, $66.00

2447WW Whitewing (97 days) F-1 hybrid. These firm, almost perfectly round handsome one-pound bulbs with slender strong necks will boost almost anyone's market. Trialer Donna Dyrek, who praises Whitewing lavishly, has grown them even bigger, up to 1 1/2–2 lb. Very early and well adapted to our climate, some years Wing can be harvested as early as mid-late Aug. In cool seasons they stand till Sept. 1. Hard, pleasantly pungent and moderately sweet. Not a great keeper; with proper curing can last till the New Year. Day-neutral type, suitable for mid-latitude and northern areas. ④

A=1/16oz, $3.30 **B**=1/8oz, $6.00 **C**=1/2oz, $20.00 **D**=1oz, $37.00 **E**=4oz, $140.00

SCALLIONS *A. fistulosum*

Can be direct-seeded, spring or fall. For a steady market crop, seed every two weeks all season.

2439EV Evergreen Hardy White (65 days) Open-pollinated. Also known as Nebuka, a perennial bunching onion. If overwintered in the ground, develops clumps of scallions in the spring that can be harvested or divided and replanted. A welcome treat in April, one of the first fresh foods. Heirloom from Japan originated in the 1880s. Resists PR and smut. ~15,000 seeds/oz. ④

A=1/16oz, $1.70 **B**=1/8oz, $2.70 **C**=1/2oz, $5.50 **D**=1oz, $8.00
E=4oz, $15.00 **K**=1lb, $50.00

SHALLOTS *A. cepa* (aggregatum group)

2441GO Glacier Rose OG (100 days) Longtime Montana farmer and plant breeder Judy Owsowitz loved the hybrid shallot Prisma for its beauty, taste and long storage. So when she heard it was to be discontinued, she pursued her passion, selecting for those traits from the seed that was still available. Six years later she's come up with the stunning Glacier Rose, named for its rosy color and the sight of Glacier National Park from her farm. The large 3" bulbs, mostly doubles, retain the parent's good flavor and, like Prisma, store until the next year's crop comes in. Despite global warming, this Glacier is here to stay. Ω ① **NEW!**

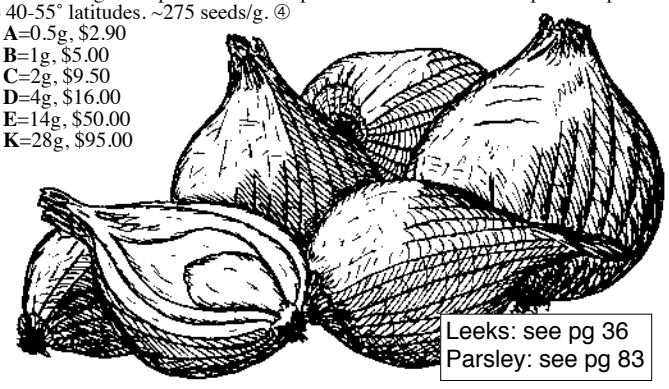
A=1/16oz, $2.00 **B**=1/8oz, $3.60
C=1/2oz, $12.00 **D**=1oz, $20.00

2443EO Ed's Red OG (105 days) Open-pollinated. Several years ago when we were looking for a Prisma replacement we put a couple open-pollinated candidates into our trials. Ed's Red won hands down in taste: full flavored, delicious, sweet and meaty. But the form was not at all uniform. Enter farmer-extraordinaire Beth Rasgorshek (profiled on pg 8), who spent the intervening years selecting for color, vigor, uniformity and size. The result is this newly improved Ed, fresh out of the field. Beth sees it as ideal both for home use and for chefs, and is impressed with how it stands up under weed pressure. These fairly large gorgeous red shallots have storability almost as great as the legendary Prisma. ① **BACK!**

A=1/16oz, $2.00 **B**=1/8oz, $3.60

2442CL Camelot (110 days) F-1 hybrid. Camelot, the darkest red-skinned variety available from seed, is our choice for a good Prisma replacement with the same smooth and onion-y taste. When divided, has a bigger bulb than Prisma, 1–1 1/2" across and 2" long. Donna Dyrek's were out of the ground curing on Sept. 20 from an April 6 start. Can store till April. Adapted to 40-55˚ latitudes. ~275 seeds/g. ④

A=0.5g, $2.90
B=1g, $5.00
C=2g, $9.50
D=4g, $16.00
E=14g, $50.00
K=28g, $95.00



Leeks: see pg 36
Parsley: see pg 83

Parsnips

Pastinaca sativa **~7,000 seeds/oz. All open-pollinated.**

Culture: Seed is short-lived; if you are planning to use old seed, germ test in paper towels before sowing. Slow to germinate (14–21 days). Prepare a deep seedbed and keep it moist with frequent watering until emergence. Sow about 1" apart in mid-spring. Thin to 2–3". Parsnips require a full growing season. Suitable for harvest after frost for late fall delights. Parsnips left to overwinter in the ground will nearly triple their fall sugar content. For the best early spring treats, harvest as soon as possible before the plants resume growth. Roots become woody as the plants re-grow. Save some plants for seed in year two. Plants will shoot up 6' before July-Aug. seed harvest. Homegrown parsnip seed often is better and more viable than any you can buy.

Minimum germination temperature 46˚, optimal range 55–77˚.

Days to maturity are from date of seeding.

2306DO Andover OG (120 days) Always a best-seller when we have the seed for this outstanding variety—an absolute knockout in our trials. Those with good tilth can anticipate consistent production of refined tapered cylindrical roots 12–14" long. Developed by the U of Minnesota. One of the best for grating and stuffing into eggrolls, strudels and veggie pies. ①

A=1/8oz, $2.30 **B**=1/2oz, $6.00 **C**=1oz, $10.00 **D**=4oz, $38.00
E=1lb, $140.00

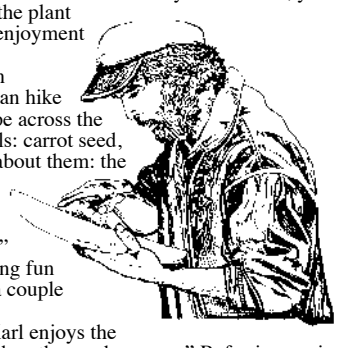
2310HA Harris Model (120 days) Sweet-flavored smooth tapered roots average 10". For better performance, prepare raised beds, especially in heavy soils. Don't believe stories that this strain is running down. It looked great in our plots. ②

A=1/8oz, $1.30 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $6.00
E=1lb, $16.00 **K**=5lb, $75.00

Gleanings from our Seed Growers (part 4)

Karl Sutton, of Fresh Roots Farm, grew up in central Oregon and, in a move contravening the usual seed-growing scenario, ended up to the east in Montana. He equates his early life as a wilderness guide for at-risk kids to the growing of seed: "Growing seed is like climbing a mountain: there's an unknown factor, especially the first few times. I enjoy having to figure it out. I enjoy the challenge. It's rewarding to solve the problems, relationship-wise, to grow the plant, to handle the harvest and then to clean the seed."

Growing for fresh market, the farmer can usually replant and get a second chance when needed. Not so with seeds. "It's hard to have only one chance, year to year." But he enjoys the second half of the plant cycle, as they make seeds. "And it's pure enjoyment having flowers all over the place."



Fresh Roots is at the base of the Mission Mountain Wilderness Area, so close you can hike off into the wilderness. Bears regularly lope across the 60-acre farm, which specializes in biennials: carrot seed, radishes and beets. Karl loves everything about them: the preparation, the storage and the re-planting. He loves the flow of carrots and beets, "oh their fragrance, their pungent smell on the farm, is intoxicating." And cosmos get the thumbs up, too, as being fun and "harvested at a whole different pace, a couple times a week."

The pace of seed saving is partly why Karl enjoys the work. "It suits my temperament, more so than the produce race." Referring again to his time in the mountains: "Seed is a long expedition—and there are always improvements to be made along the way, to alter course."

Though they do sell some produce, carrots, greens and strawberries (plus popsicles at the music festivals), they're mostly growing seeds. On their five planted acres, two and a half are in seeds. "And the produce farmers think we're just sitting around eating bonbons until that seed comes in."

Those who know otherwise are the seven other farmers of Triple Divide Organic Seeds Cooperative, the Montana farmers who have intentionally decided to group together around seed. Having this foundation of people with experience and interest in seed has allowed experimentation since the members could grow seed while *not* under contract. "This allowed us more room to grow and fail," Karl said. "And having a network to work with allowed us to get training; it allowed us to bring people to us, or for us to go to them." Plus it facilitates sharing of equipment, efficiencies and information. "There are not a lot of seed growers in Montana. We get together one time a year for a two-day retreat and talk about our successes and challenges. It's great to look at seed together."

The biggest challenge Karl faces these days is the inconsistency of weather. There has been no first-frost/last-frost consistency as long as he's been farming in Montana. "For example, zucchini did good last year, but not this year. It makes it hard to plan for success and I haven't built up enough knowledge to address these challenges. There's not a lot of support (around this)…and these would be challenges enough for a seasoned farmer."

If you want to start saving seed, Karl advises to first start by trying things out. For example, letting lettuce go to seed in order to see how to do it. "And write down good notes…yield, etc. Just let some things go, and observe it. There's a lot to observe."

PEAS

.PISUM SATIVUM.

2 oz packet sows 25 ft; 1 lb, 200 ft. Avg 250 seeds/2 oz pkt. All peas are open-pollinated. Days to maturity are from date of seeding.

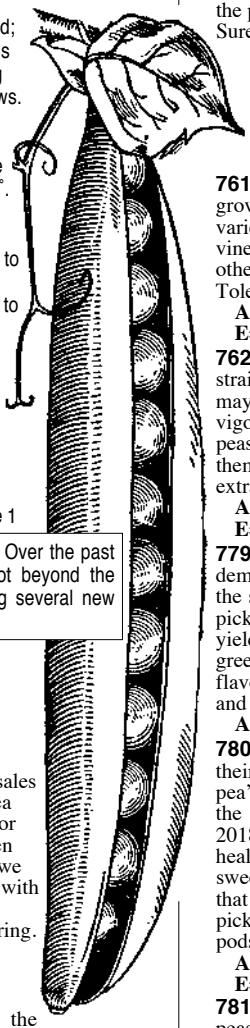
Culture: Peas are legumes with moderate fertility requirements. Avoid excess nitrogen: they can fix their own. Use **798** Legume Inoculant as an aid. They prefer cool, moist weather and dislike dry heat. Sow as early as ground can be worked for best yields. All peas produce more when staked; varieties over 2½' *must* be supported. Use either **8859** Trellis Plus or chicken wire. Install support at planting time to avoid disturbing seedlings. Plant 1½" apart on each side of supports in double rows. Set supports for rows 3' apart (5' for tall varieties).

Not well adapted to southern climates. Smooth-seeded peas germinate better in colder soils than wrinkle-seeded peas, but are not as sweet. Minimal soil temperature: 40˚, optimal range 50–75˚.

Powdery mildew looks like someone sprinkled talcum powder over the vines. It spreads rapidly when picking occurs in hot dry weather. Pick in early morning while the dew is still on the foliage to slow its spread and ensure best flavor. To combat the fungus, try Actinovate (**8702** in the supplies section). Fusarium causes vines to dry out, yellow, then brown and die. As a preventive, always sow peas on well-drained soil. Fusarium-infested soils are said to be pea sick. Rotate out of legumes for at least 4 years. Brassicas, especially mustards, are good disease-suppressant successions.

Diseases:

CTV	Curly Top Virus	PM	Powdery Mildew
DM	Downy Mildew	PRR	Pythium Root Rot
F	Fusarium	PSV	Pea Streak Virus
PEMV	Pea Enation Mosaic Virus	W	Common Wilt race 1



Off-types in peas continue to be a problem across the industry. Over the past several years we have eliminated some old favorites that got beyond the bounds of what is acceptable for those varieties, while adding several new varieties we find more reliable. We will keep working at it!

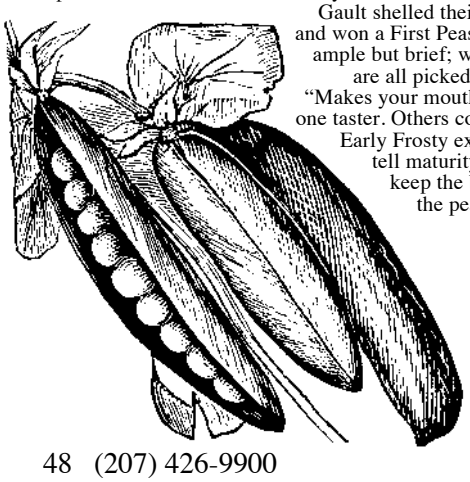
If you can grow good peas, in lots around 50–200 lbs, in areas without prevalent pea diseases or pea weevils, and you want to work with us, please let us know.

SHELL PEAS

720PE Strike (52 days) You won't strike out on early pea sales with this winner in your starting lineup. A first-early shell pea with an average of 6 dark green peas in 2¾" pods and a flavor that is sweeter and more complex than other early peas. When both veteran trialer Donna Dyrek and staffer Roberta agree, we know we're in the game. Vines about 2' can be grown either with or without support. PRR tolerance and resistance to F1, an advantage when planting in the cold wet soils of northern spring. **PVP**. ⑥ **NEW!**

A=2oz, $1.80 **B**=8oz, $5.40 **C**=1lb, $8.00
D=5lb, $25.00 **E**=10lb, $40.00 **K**=25lb, $90.00

727TP Topps (56 days) Those who grew up during the heyday of our national pastime associate the name with bubble gum and baseball cards. Even though we're talking peas, not hardball here, we still appreciate Topps. In the 2015 season in Zone 6, Topps, given ample rainfall in late spring, notched about 5–7 peas per pod. Not bad for a short vine (22–23") that bursts onto the second-early scene with a concentrated set of very dark blunt 3½" pods. In Central Maine second early meant July 10 ripeness, whereas in W. Tisbury, MA, Tom Hodgson and Christine Gault shelled their first Topps on June 8 and won a First Peas contest. Production is ample but brief; within a week the plants are all picked out. As for the flavor? "Makes your mouth water for more," said one taster. Others compared it closely with Early Frosty except Topps is easier to tell maturity and to shell. You can keep the bubble gum, we'll take the peas! Resists F1. ⑥



A=2oz, $1.90
B=8oz, $5.60
C=1lb, $9.00
D=5lb, $30.00
E=10lb, $50.00

758EO Emerald Archer OG (65 days) What can scale a pea fence with a plethora of tendrils, pump out a super abundance of peas per pod, all the while delighting a six-year-old? Emerald Archer to the rescue in the mid-season slot! This afila-type pea is quite productive, setting in pairs and having 10 peas to the pod. Not an off-type among them and tasty too. The upright habit of the 36–42" plant makes for easy picking. And gardening grandson Evan declared these afila tendrils were the best in the patch; the adults concurred. Sure to hit the mark. ⑥ **NEW!**

A=2oz, $1.90
B=8oz, $5.60
C=1lb, $9.00
D=5lb, $30.00
E=10lb, $50.00
K=25lb, $100.00

Greens of young pea plants are good in salad mix or lightly cooked. Remove the tendrils (they tend to be coarse) and break the stalks into 3–4" pieces, each with some leaves.

761GO Green Arrow OG (65 days) The pea preferred by commercial growers, always on target for heavy yields. Sets the standard for midseason varieties. Long pods with up to 10 peas per pod (more typically 7–8) on vines up to 3'. Seems to withstand miserable and extreme weather better than other varieties. Easy to pick because pods tend to set in pairs at the top. Tolerant to F, DM, CTV, W. ①

A=2oz, $2.80 **B**=8oz, $7.70 **C**=1lb, $12.00 **D**=5lb, $52.00
E=10lb, $96.00 **K**=25lb, $225.00 **L**=50lb, $400.00

762PF Perfection 326 (66 days) We haven't been able to find any true strains of Maestro on the market, but those searching for that revered variety may want to give Perfection a try. These 3–4' vines showed great health and vigor that translated into an abundant crop of 3½" pods, usually with 7–8 peas each. They outyielded the so-called Maestro strain we trialed alongside them. They hold color and texture well, resist wilts and drought, and are extraordinarily sweet and meaty. ③

A=2oz, $1.80 **B**=8oz, $5.00 **C**=1lb, $8.00 **D**=5lb, $24.00
E=10lb, $40.00 **K**=25lb, $75.00

779NA Iona Petit Pois (68 days) The discriminating French palate demands smaller sweeter more tender pods with peas that are only about half the size of the ones we eat here. Although it takes more time and trouble to pick a mess of these, the rewards are commensurate with the effort. A heavy yielder for a petit pois, Iona sets two and sometimes even three blunt 3" dark green pods per node, on short 24–28" vines, with exceptional sweet full pea flavor. "Iona rules, the best thing you ever put in your mouth," advise Ernie and Patty Case of Milo, ME. Tolerant to F1-2 and PM. ⑥

A=2oz, $2.00 **B**=8oz, $5.60

780CE Champion of England (70 days) The British take their peas and their beer seriously. And legend has it that this superb 1840s English shell pea's original stock seed was traded for a pot of beer. Must have been quite the pint, 'cause this is one heck of a pea! Even in the dry heat of spring 2018, these 5–7+' vines with white flowers showed excellent vigor and health. Setting steadily and heavily, the 4x¾" pods contained 8–10 very sweet and tender large peas. We find this Champion exhibits a classic trait that Americans are less accustomed to: for best flavor without starchiness, pick when pods are large but still have an airy "give," rather than waiting till pods are filled tight. ② **NEW!**

A=2oz, $4.00 **B**=8oz, $14.00 **C**=1lb, $20.00 **D**=5lb, $90.00
E=10lb, $170.00 **K**=25lb, $400.00

781LC Lincoln (70 days) This old English favorite is one of the sweetest peas and the best for fresh garden grazing. First offered in America by J.M. Thorburn in 1908, the year before the first Lincoln penny. Vines up to 3' bear 3–3½" slender curved pods with heaviest production in mid-July. Consistently 6–8 peas per pod. In 2004 our 60' row produced an all-time record 33 lb. Lincoln loves cool rainy Julys but produces much less when July is hot and dry. Susceptible to PM and other diseases so a good choice only if you can get on your ground in *early* spring. Tolerant to W. ③

A=2oz, $1.90 **B**=8oz, $5.60 **C**=1lb, $8.50 **D**=5lb, $23.00
E=10lb, $40.00 **K**=25lb, $75.00

Mayfair OG (72 days) No crop this year but *still* on our radar for the future. *Not available in 2019*.

792AL Alderman or **Tall Telephone** (75 days) All-America winner Mr. Big got the hype, but failed to supplant this old-time favorite as our #1 tall pea. In our trial, Alderman topped Mr. Big in peas per pod, 7.65–6.94, in yield 38–28 lb per 100 row feet, and in flavor. Alderman boasts vines of 5–6' or more under fertile conditions; needs strong staking and frequent picking. Introduced by renowned pea breeder Thomas Laxton around 1891 and first sold by Burpee in 1901. Resistant to W. ③ **BACK!**

A=2oz, $1.80
B=8oz, $5.00
C=1lb, $8.00
D=5lb, $24.00
E=10lb, $36.00
K=25lb, $72.00

SNOW PEAS

Harvest snow peas before pods fill out.

Oregon Giant (60 days) This Oregon State University release bred by Dr. James Baggett is our most popular snow pea. A giant selection from a giant of a breeder, Oregon Giant is distinguished for its sweet rich green fat wide 4–5" pods good for stir-fries, steaming and eating out of hand. Retains sweetness so may be picked a little plumper than the thin-podded varieties. We recommend staking the 3–4' vines. Resistant to PEMV, PM and F1.

818GT Oregon Giant ③⑥
A=2oz, $2.00 **B**=8oz, $5.40 **C**=1lb, $8.00
D=5lb, $25.00 **E**=10lb, $45.00 **K**=25lb, $90.00
L=50lb, $160.00

819GO Oregon Giant OG ①
A=2oz, $2.90 **B**=8oz, $8.00 **C**=1lb, $14.00
D=5lb, $55.00 **E**=10lb, $100.00 **K**=25lb, $240.00
L=50lb, $410.00

820GB Green Beauty (60 days) Thanks to superb breeding by genius Alan Kapuler, revered by his friends as "Mushroom," we get to enjoy this outstanding purple-flowered snow pea. Its lush foliage and astounding production made a huge impression in our trials. Long 5" light green pods, a few with pink blush, ridiculously tasty even when filled out. Flowers are in two tones. Stake this rampant baby; it can grow 7–8' vines. **BR** ②
A=2oz, $3.80 **B**=8oz, $13.00 **C**=1lb, $24.00
D=5lb, $110.00 **E**=10lb, $200.00

822BO Blizzard OG (61 days) Named Blizzard because this snow pea produces an avalanche of sweet thin 3" pods in heavily concentrated sets, not because it can be planted in the snow. It is still the best intermediate-vined snow pea we have ever tried. The 3–3½' vines setting peas in pairs, making for fast and easy picking. In the dog days of summer this is one blizzard you'll be hoping hangs on a few days longer. ① **BACK!**
A=2oz, $2.60 **B**=8oz, $7.00 **C**=1lb, $12.00
D=5lb, $50.00 **E**=10lb, $90.00 **K**=25lb, $200.00 **L**=50lb, $350.00

826SP Oregon Sugar Pod II (62 days) Dr. Baggett's biggest claim to fame and still the most popular edible-podded pea in the world (although our customers greatly prefer Oregon Giant). Baggett, whom we honored in our 1998 catalog feature on eminent plant breeders, passed away in 2016, and left a lasting legacy of superior varieties and support for open-source plant breeding. His short-vined snow pea from Oregon State University features 4" pods on 2–2½' vines. Difficult to pick because fruit tends to set within foliage. Good choice in sandy soils or under dry conditions. Tolerant to F, PM, PEMV, PSV, resistant to W, it incorporated more disease tolerance than other pea varieties of that era. ⑥
A=2oz, $1.90 **B**=8oz, $5.50 **C**=1lb, $9.00 **D**=5lb, $26.00
E=10lb, $45.00 **K**=25lb, $90.00 **L**=50lb, $160.00

SNAP PEAS

Don't pick snap peas too soon: snaps taste sweetest when completely filled out.

883AO Sugar Ann OG (58 days) 1983 Silver All-America winner bred by Calvin Lamborn and named for one of his daughters. Very popular both with home gardeners and commercial growers. The earliest snap pea, ripening in Central Maine around June 20, earlier in warmer areas, when customers are still excited about peas and greedy to purchase them in quantity. Alan LePage says good timing is crucial for optimal root development, the key to high yields. If you sow early into cool soil with good organic matter and your soil doesn't heat up too fast, they produce bushels and bushels well into July and can command up to $8 per lb. He has sown as early as Mar. 18 in a warm spring, more commonly in early April. Very good quality, sweetest of the dwarf snap peas. Not as heavy-yielding as tall Sugarsnap. Use the 2' vines to start the season. Allow extra space between rows if you do not stake. *Still has a small percentage of off-types*. Resistant to W. ①
A=2oz, $2.80 **B**=8oz, $7.60 **C**=1lb, $12.00
D=5lb, $50.00 **E**=10lb, $85.00 **K**=25lb, $210.00
L=50lb, $390.00

884MG Mega OG (64 days) 2015 was a superb year to grow Mega for seed—12" of rain in June stimulated copious flowering and podding, the heat in August facilitated dry down on the vines. And 2018 was finally a good year to get a plentiful seed crop. These vigorous 3' vines have been outstanding performers in Colrain three years running, heavily laden with slightly curved crisp juicy 4" snap pods that reach maximum sweetness when they are really chubby. Between Sugar Ann and tall Sugarsnap in vine height and maturity, but sturdier vines than either. First offered by Territorial. We thank Rebecca Slattery of Persephone Farm in Indianola, WA, for providing us with stock seed. In her words, "Though not as sweet as Sugarsnap, their shorter vines, productivity and delicious pea flavor put them in a class of their own. As a market gardener I find that their heft helps us collect a huge poundage in a very short time." Resists PEMV. ① **BACK!**
A=2oz, $2.80 **B**=8oz, $7.70 **C**=1lb, $12.00 **D**=5lb, $50.00
E=10lb, $85.00 **K**=25lb, $210.00

885AM Amish Snap Pea (62 days) Before Drs. Lamborn and Parker bred the now-epic 1952 Sugarsnap, lesser-known precursors called *mangetout* ('eat all' in French) peas and "butterpeas" were curiosities of the 18th and 19th c. Whether derived from those older stocks or from an errant but similar shell-snow pea cross as Sugarsnap, this tall and tasty heirloom has long been enjoyed in Amish communities. Vines grow quickly to 5–6' tall, the white flowers set slender and tender 3" sweet snaps. Beyond the pleasing juicy flavor, the earliness of Amish surprised us in our 2018 trial, beating shorter Cascadia to the first picking! While Cascadia's ongoing yield eclipsed Amish eventually, we found Amish delivers the "tall taste" that only full-height snaps have. For best eating, pick Amish when not fully plump and before dusky grey tones shade the green pods. ② **NEW!**
A=2oz, $3.60 **B**=8oz, $12.00 **C**=1lb, $20.00 **D**=5lb, $80.00
E=10lb, $150.00 **K**=25lb, $325.00

Cascadia (65 days) It's a snap to grow Cascadia. Ripening about a week later than Sugar Ann on slightly taller (2½') vines, Cascadia sends a cascade of 3" pods, longer and darker green than Ann's and equally sweet. Deborah Dorland of Salem, SC, found them to be the best of several snap pea varieties in her southern locale. David Nonnenmacher of Hawley, PA, reports "great yield on a medium-height plant; can never have too many of these." Developed by Dr. Baggett, tolerant to F & PM, and the first pea bred to be resistant to PEMV.

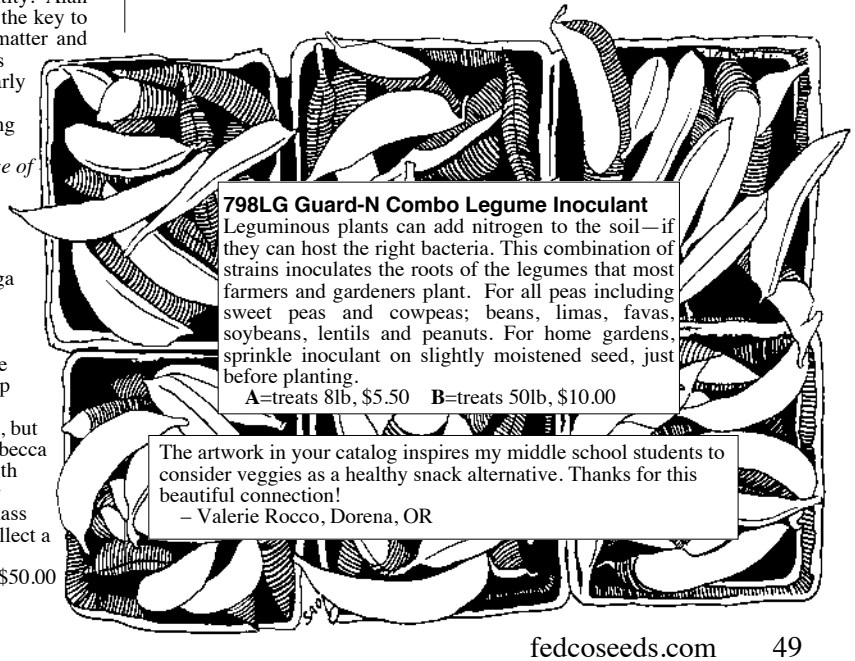
888CA Cascadia ③⑥
A=2oz, $1.90 **B**=8oz, $5.60 **C**=1lb, $8.00 **D**=5lb, $28.00
E=10lb, $46.00 **K**=25lb, $92.00 **L**=50lb, $175.00

889CO Cascadia OG ①
A=2oz, $2.70 **B**=8oz, $7.60 **C**=1lb, $11.50 **D**=5lb, $49.00
E=10lb, $95.00 **K**=25lb, $230.00 **L**=50lb, $390.00

891TS Tendersweet (65 days) This 2' tall snap pea is aptly named by the breeder: upon taking the first nibble from our trial planting, "Wow! Tender!" was the first impression, quickly followed by "and sweet!" Tendersweet bears 2½–3" dark green and slightly curved snap pods earlier and more prolifically than Sugarheart, which it replaces. Even in a hot 2018 spring, we found Tendersweet to have a longer picking window than most quick and short types. Needs light trellis support. Resistant to F1 and PM. ⑥ **NEW!**
A=2oz, $1.90 **B**=8oz, $5.60 **C**=1lb, $9.00 **D**=5lb, $30.00
E=10lb, $50.00 **K**=25lb, $100.00

894SS Super Sugarsnap (66 days) Super Sugarsnap is slightly earlier and shorter (a bit over 5') with about two-thirds the set of Sugarsnap but more concentrated over a shorter picking period. Perhaps a tad less sweet than its taller counterpart, Super has PM resistance, an important plus, and its pods are a bit more curved. Very similar to Sugarsnap in flavor and texture. Must be trellised. **PVP**. ⑥
A=2oz, $2.60 **B**=8oz, $7.00 **C**=1lb, $11.00 **D**=5lb, $34.00
E=10lb, $60.00 **K**=25lb, $120.00 **L**=50lb, $215.00

893SO Sugarsnap OG (68 days) Always a top seller, this breakthrough variety was ten years in the making after breeder Calvin Lamborn made his first cross in 1969. Upon its release Sugarsnap was awarded the coveted AAS Gold Medal and later voted the #1 all-time AAS. The late Lamborn was known as the father of the snap pea. His original is one of the very best raw treats in the garden, far tastier than the dwarf varieties, although more work to grow. Tall Sugarsnap vines climb 5–7' and need strong stakes. Pods reach superb sweetness only when completely filled. Then they are incomparable. *Our production still has a small percentage of off-types*. Resistant to W, very susceptible to PM. ①
A=2oz, $2.90 **B**=8oz, $7.50 **C**=1lb, $12.50 **D**=5lb, $55.00
E=10lb, $96.00 **K**=25lb, $225.00 **L**=50lb, $400.00



798LG Guard-N Combo Legume Inoculant
Leguminous plants can add nitrogen to the soil—if they can host the right bacteria. This combination of strains inoculates the roots of the legumes that most farmers and gardeners plant. For all peas including sweet peas and cowpeas; beans, limas, favas, soybeans, lentils and peanuts. For home gardens, sprinkle inoculant on slightly moistened seed, just before planting.
A=treats 8lb, $5.50 **B**=treats 50lb, $10.00

The artwork in your catalog inspires my middle school students to consider veggies as a healthy snack alternative. Thanks for this beautiful connection!
– Valerie Rocco, Dorena, OR

PEPPERS

Capsicum annuum

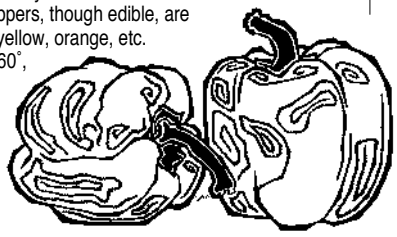
Sweet bell peppers average 120–175 seeds/g.

Culture: Very tender, will not tolerate frost, dislike wind, will not set fruit in cold or extremely hot temperatures or in drought conditions. Start indoors in March or April. Set out in June. Black plastic highly recommended. Row cover improves fruit set in windy spots. Pick first green peppers when they reach full size to increase total yield significantly. Green peppers, though edible, are technically not ripe. Peppers ripen to red, yellow, orange, etc.

Minimum germination soil temperature 60˚, optimal range 68-95˚.

For all peppers, days to full-color maturity are from transplanting date.

Diseases:
BLS Bacterial Leaf Spot
CMV Cucumber Mosaic Virus
TMV Tobacco Mosaic Virus



SWEET RED BELLS

3701AC Takii's New Ace (60 days) F-1 hybrid. A cinch to grow in the North. CR, no pepper pro, reported counting 54 full-sizeds and 12 baby peppers on his 11 plants on Sept. 8, 2014, a good pepper year. Resists blossom drop even in adverse weather so that almost every flower produces. Fruits thin-walled, elongated, not blocky, turn red early, good for the home garden. Takii's is an improvement on the old strain, producing large pointy peppers, just not classic blocky 4-lobed commercial peppers. Janine Welsby responds, "Don't damn them with faint praise! Still the only pepper that consistently ripens gorgeous red bells for us." ⑤
A=20 seeds, $2.20 **B**=60 seeds, $4.00 **C**=200 seeds, $8.50
D=500 seeds, $18.00 **E**=1,000 seeds, $32.00

3704PO Peacework OG (65 days) Open-pollinated. An exciting early red bell pepper bred by Molly Jahn and George Moriarty with King of the North and Early Red Sweet in its parentage. Each small plant in our trial vine-ripened about 6 medium-thick-walled peppers with good flavor and full-bodied sweetness. A product of farmer-breeder collaboration starring CSA-grower Elizabeth Henderson and her team at Peacework Farm in cooperation with the Organic Seed Partnership, the California Pepper Commission and university breeders, Peacework is a stabilized open-pollinated variety. This improved production has better leaf cover than in the past and looked gorgeous in the field. Seed from this variety is sold under license and a portion of the proceeds go to support public vegetable breeding at Cornell University. ☙2008. **BR** ①
A=0.2g, $2.20 **B**=0.4g, $3.40 **C**=1g, $5.50 **D**=2g, $8.50
E=4g, $15.00

3710LB Lady Bell (68 days) F-1 hybrid. An early elongated bell with 3–4 lobes that we chose as a replacement for North Star. Fruits ripen from rich green to attractive bright red. A good producer of 3x5" bells, juicy and sweet with a hint of spiciness. Even in cool conditions, each plant sets 3–8 fruits. Developed by Harris. ⑤
A=20 seeds, $2.90 **B**=60 seeds, $6.50 **C**=200 seeds, $18.00
D=500 seeds, $36.00 **E**=1,000 seeds, $60.00

3713NO King of the North OG (70 days) Open-pollinated. Back in the late '80s when Seed Savers Exchange co-founder Kent Whealy keynoted at the Common Ground Fair we asked him to suggest a pepper that would ripen in the North. His suggestion was King and it has been our most popular open-pollinated bell ever since. A good choice if you want early marketable blocky peppers. Prone to blossom-drop in heat. ①
A=0.2g, $2.10 **B**=0.4g, $2.60 **C**=1g, $4.00
D=2g, $6.00 **E**=4g, $10.00

3716RV Revolution (72 days) F-1 hybrid. Those of us who still "feel the Bern" now know that the political revolution is going to take a lot longer to mature than the pepper Revolution. Not at all hot, this fancy quality sweet bell pepper allows CR to have a red September and Donna Dyrek, a zone farther north, a red October. Juicy and delicious, it boasts the stoutest square walls imaginable. Superb yields of "nice hefty thick-walled fruits," says Jason Kafka, some in excess of 1 lb. Elaine Carlson relates, "I finally had success growing good sweet peppers 12–14 oz each thanks to Kafka's recommendation. No more thin-walled peppers for me." Expensive seed. Resists BLS, tolerant to CMV. ⑤
A=20 seeds, $4.00 **B**=60 seeds, $10.00
C=200 seeds, $26.00 **D**=500 seeds, $60.00
E=1,000 seeds, $105.00

3725SO Staddon's Select OG (74 days) Open-pollinated. Worthy of consideration except in the very cold climates where it is poorly adapted. This good large blocky market-type pepper makes early production of good-sized glossy dark green 3–4 lobed peppers on tall bushy plants, even in adverse conditions. ①
A=0.2g, $1.30 **B**=0.4g, $2.00 **C**=1g, $3.00 **D**=2g, $4.20
E=4g, $7.00

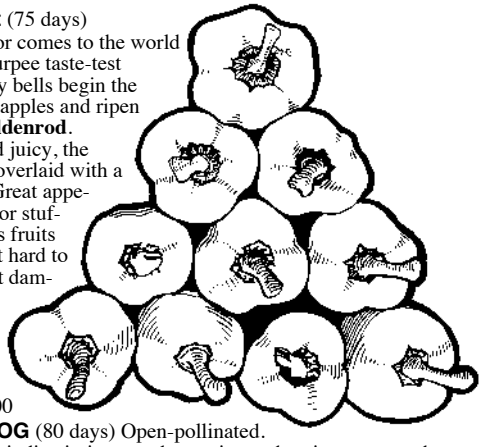
COLORFUL SWEET BELLS

3706GO Gilboa OG (66 days) F-1 hybrid. Our favorite blocky **orange** bell pepper. Gilboa is loaded with thick-walled crunchy squat bells, as many as a dozen per plant, with an engaging fruity flavor. Donna Dyrek started harvesting ripe ones as early as mid-August. Early, and organic, too. ③
A=20 seeds, $2.30 **B**=60 seeds, $5.00 **C**=200 seeds, $13.00
D=500 seeds, $28.00 **E**=1,000 seeds, $50.00

3718GS Golden Star (72 days) F-1 hybrid. With its large 4-lobed 4" glossy thick-walled blocky **yellow** peppers, this Star filled a gap in our selection admirably, a prolific colored Cal Wonder–type adapted to the North, even though bred in Israel. On Sept. 26 one plant sported 7 fruits, and another, 10. Our trialer describes them as "nice, sweet and crispy." Plants boast generous leaf canopies. Ripened in Zone 4 Hartland, ME, around the first of September. ③
A=20 seeds, $2.50 **B**=60 seeds, $4.50 **C**=200 seeds, $11.00
D=500 seeds, $22.00 **E**=1,000 seeds, $35.00

3723PO Purple Beauty OG (74 days) Open-pollinated. Tom Vigue asserts that this Beauty "germinates with more vigor than any other pepper" and produces a good yield of blocky 3x3" fruits that ripen from **purple** to green to **deep red** as they mature. Aptly named, the fruits are incredibly striking in their purple phase. "Year after year it has great flavor and great beauty in all stages," affirms Vigue. Purple peppers reveal green interiors when sliced, and turn green in their entirety when cooked. Trialers noted that this organic production was loaded with peppers while the plants from conventionally grown seed were not. And this year's trial bested the purple hybrid, too. Grows 18–20". ①
A=0.5g, $1.90 **B**=1g, $2.80 **C**=2g, $4.50 **D**=4g, $6.00
E=28g, $26.00

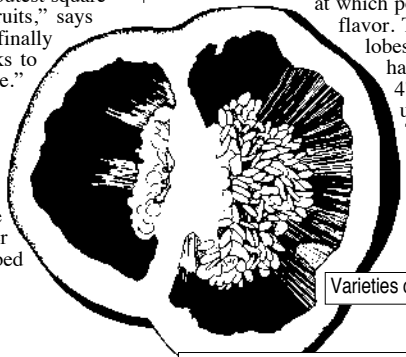
3729FB Flavorburst (75 days) F-1 hybrid. Citrus flavor comes to the world of sweet peppers! A Burpee taste-test winner, the 4–6" blocky bells begin the color of Granny Smith apples and ripen to a lovely shade of **goldenrod**. Thick-walled, crisp and juicy, the expected peppery bite overlaid with a zesty surge of lemon. Great appetizers, salad enhancers or stuffers. Tends to wedge its fruits into branches making it hard to harvest quickly without damaging the plant. ④
A=20 seeds, $3.10
B=60 seeds, $8.00
C=200 seeds, $22.00
D=500 seeds, $42.00
E=1,000 seeds, $78.00



3735CO Chocolate OG (80 days) Open-pollinated. Our warehouse crew is indiscriminate and voracious when it comes to chocolate. But our trial evaluators were much more circumspect, rejecting various strains of chocolate peppers as far too unproductive until we found this Chocolate. Our seed grower reports every plant has at least a dozen fruits, some 20 or 30, so that sometimes plants fall over! Three-lobed 5x2" elongaged tapered fruits turn from green to **glossy brown**. Once ripe, the thick-walled flesh (burgundy-red inside, chocolate outside) has the taste we sought for so long. ①
A=0.2g, $2.30 **B**=0.4g, $3.40 **C**=1g, $6.00 **D**=2g, $10.00

3737CC Chocolate Cake ECO (90 days) Open-pollinated. In these times of gluten, dairy and sugar avoidance, here's a Chocolate Cake everyone can enjoy. In taste tests this rich **reddish brown** 3½x3½" blocky thick-walled pepper had great sweetness and flavor. Best of all, if you can't wait for them all to ripen, you'll find that as a green pepper Chocolate Cake is as meaty, sweet, delicious and flavorful as many other types of fully ripe peppers. That breeder Doug Jones continues to select this pepper for earliness, yield and flavor is just icing on the cake. *Supply limited*. **BR** ①
A=0.2g, $2.50

3739CR Corona ECO (90 days) Open-pollinated. An early maturing green-to-**orange** sweet bell pepper worth the three month wait to fully ripen, at which point the stunning color is rivaled only by its sweet flavor. The large thick-walled 3½" blocky fruit with 3–5 lobes is easy to harvest and can attain a weight of up to half a pound. Productive, too! Good foliage cover on 4' plants helps to prevent sunscald. No need to wait until 2024 to see your next corona here in Maine! TMV resistant. ① **NEW!**
A=0.2g, $2.30
B=0.4g, $3.60
C=1g, $6.00
D=2g, $8.00
E=4g, $12.00



Varieties organized within sections by days to maturity.

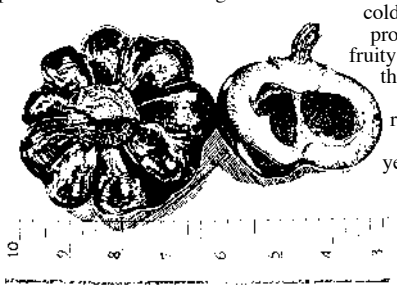
BR = Breeder royalty. We pay royalties to plant breeders. More information on page 106. A complete symbol key appears on page 5.

CHEESE

3738KO Klari Baby Cheese OG (65 days) Open-pollinated. Also known as Golden Delicious Apple Pepper. From Hungary, a Fedco introduction to the U.S. Wini Noyes says a good choice "for the pepper-challenged" to grow. Cheese peppers are flattened and filled with a soft sweet mild core. Shaped like 3" Rouge Vif d'Étampes pumpkins, the squat thick-walled 4 oz fruits were unlike anything we'd ever tried. I couldn't stop eating these delicious summertime treats out of hand. Traditionally they are pickled whole after ripening from **white** to **yellow** to **red**. Named after the woman who has maintained this heirloom seed stock. ☙1997. 115-125 seeds/g. ①
A=0.5g, $2.30 **B**=1g, $3.60 **C**=2g, $6.00 **D**=4g, $10.00
E=28g, $46.00

PIMIENTOS

3740SO Sweet Pimiento OG (80 days) Open-pollinated. Perhaps the provenance of this seed grown in the North Carolina mountains boosts its cold-climate adaptation. Early and productive with an enjoyable rich fruity taste. We harvested several of these red pimientos in a difficult season. More skilled growers report 15–20 peppers per plant. Early and prolific even in bad years. ~ 115-125 seeds/g. ①



A=0.2g, $2.00
B=0.4g, $3.00
C=1g, $5.00
D=2g, $6.00
E=4g, $11.00

3741PO Amish Pimiento OG (85 days) Open-pollinated. Pimientos are the sweetest of all peppers—my favorites for eating out of hand. The problem with growing seed for Amish Pimiento is that you have to restrain yourself from eating the seed crop. Blame it on the rich sweet fruity taste of these 2x4" squat ribbed fleshy red fruits, productive and fairly early, thick-walled and crunchy. ① **BACK!**
A=0.2g, $2.20 **B**=0.4g, $4.00 **C**=1g, $6.00 **D**=2g, $8.00
E=4g, $12.00

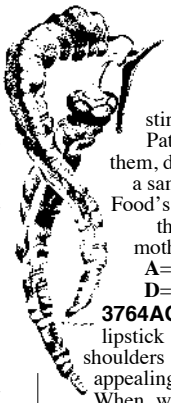
3744TO Tangerine Pimiento OG (85 days) Open-pollinated. In the words of one customer, these beautiful tangerine-colored pimientos are a joy to harvest, standing out "just like little lights." Sweet and juicy, great for eating fresh or roasting. Plants are modest in height and bushy, yet capable of ripening more than a dozen squat 2–3" round to slightly flattened 3–4 lobed thick-walled fruits in a good year. "They might have a small body, but they carry a big pizazz," opines Anne Elder. ~ 115-125 seeds/g. ①
A=0.2g, $2.20 **B**=0.4g, $4.00 **C**=1g, $6.00 **D**=2g, $8.00
E=4g, $12.00

ELONGATED PICKLERS, FRYERS & ROASTERS

These peppers average 110–210 seeds/g.

3750TS Takara Shishito (60 days) F-1 hybrid. I was once known as The Pepper Lady so I have my standards. When I first encountered these small thin-walled second-cousins-twice-removed of Revolution peppers, I thought "Why bother?" But Fedco staffer Emily Skrobis set me straight when we judged peppers at Common Ground Fair. She loves this pepper type as early, easy and abundant. Seen in that light, they make sense, and Takara is all that—with more than a dozen wrinkled 1x3½" fruits borne early on compact well-branched plants. Typically harvested green to be roasted, fried or grilled whole, they will eventually sweeten and ripen to red. And though the seeds are more developed at this stage, the fruit can be quickly cooked up and eaten whole. Delightful flavor is mostly mild, but the occasional pepper, around 10%, will be hot. ⑤
A=20 seeds, $3.40 **B**=60 seeds, $9.00
C=200 seeds, $25.00 **D**=500 seeds, $60.00
E=1,000 seeds, $110.00

3757CO Carmen OG (70 days) F-1 hybrid. Johnny's Carmen debuted in 2006 to much critical acclaim, including a coveted AAS. A classic Italian Corno di Toro type, Carmen features unusually sweet horn-shaped tapered pointed 2½x6" fruits averaging 5 oz that won rave reviews from *all* seven of our tasters. Great for salads, especially as they ripen from green to deep carmine, with good sweet flavor. Walls have only medium thickness, so take care not to get them overly charred when roasting. Upright medium-sized plants with excellent protective canopy. Widely adapted and early maturing in its class. Rob and Janika's Carmen is as tempting as its namesake opera heroine, "fruity," "nutty," "sweet with a hint of spice." ③
A=20 seeds, $3.40 **B**=60 seeds, $9.00
C=200 seeds, $22.00 **D**=500 seeds, $48.00
E=1,000 seeds, $90.00



3762JO Jimmy Nardello's OG (76 days) Open-pollinated. This thin-walled 8" frying pepper has won many converts. The long curved tapering pointed fruits turn deep red with shiny wrinkled skin when ripe. Pleasing sweet mild flavor, good raw, in stir-fries and, especially, fried. According to Nardello family relative Patty Ruprecht of Pownal, ME, "the *only* way to eat them is to string them, dry them, fry them and salt them." Eat them plain or "better still as a sandwich on Italian bread with a slice of provolone." Listed on Slow Food's Ark of Taste. Brought to Connecticut from the village of Ruoti in the Basilicata region of southern Italy in 1887 by Jimmy Nardello's mother. ①
A=0.2g, $2.40 **B**=0.4g, $3.80 **C**=1g, $7.00
D=2g, $10.00 **E**=4g, $18.00 **K**=14g, $36.00

3764AO Apple OG (80 days) Open-pollinated. Looking more like a lipstick than an apple, these shiny 4" fruits are elongated, with wide shoulders narrowing to a point, and fairly flat, like an ancho. Irresistibly appealing even before the ripe fruity sweetness touches your tongue. When we judge peppers at Common Ground Fair these red beauties always stand out. Delicious fresh and also roasted, they are reliably productive in our cool northern summers and pretty much guaranteed to fully ripen. Dependable and problem free on 2' plants. ② **NEW!**
A=0.2g, $2.30 **B**=0.4g, $3.60 **C**=1g, $6.00 **D**=2g, $8.00
E=4g, $12.00 **K**=14g, $33.00

3766CU Cubanelle (80 days) Open-pollinated. Years ago our customers asked for this semi-sweet frying pepper and we quickly understood why. 6x2" waxy yellow-green fruits turn red. Not pungent. "Hands down our biggest fruit producer of all pepper varieties for many years now," reports Anne Elder. ②
A=0.5g, $1.50 **B**=1g, $2.10 **C**=2g, $3.00 **D**=4g, $4.50
E=28g, $6.00

3769AC Aconcagua (85 days) Open-pollinated. The highest peak in both the Western and Southern hemispheres, Aconcagua in Argentina stands a lofty 22,841 ft. This ginormous frying pepper is said to originate in Argentina. Elongated cone-shaped 2½x10" fruits tapering to a blunt rounded end can approach a foot in length. Turning from green to yellow to orange to red, the gorgeous fruits are very sweet, crunchy and fruity, ideal for grilling and frying. Delicious at any stage of ripeness. The plants reach almost 3', with such a heavy pendent fruit set that they benefit from staking. May not always ripen fully to red for northern-tier growers, although we have seen many red fruits in the Common Ground Exhibition Hall. ②
A=0.2g, $1.70 **B**=0.4g, $2.80 **C**=1g, $4.00 **D**=2g, $6.00
E=4g, $10.00

3773DO Odessa Market OG (87 days) Open-pollinated. Heirloom pepper from Odessa on the Black Sea in Ukraine whose attributes translate wonderfully to Maine's Zone 4. Strong stocky stems and unique dark green leaves easily set it apart from most others. It grows rapidly and dependably sets 7–12 fruits per plant, crisp, juicy, thick-walled and tasty. At the edible green stage the 2½x4½" tapered peppers have a distinctive wild lime color that morphs to orange and then to a deep dark red. Sweet and full-textured whether enjoyed raw, sautéed or roasted. Broad canopies with good leaf cover reduce sunscald and protect from frost. Fruits are remarkably free from blossom end rot. ①
A=0.2g, $2.00 **B**=0.4g, $3.40 **C**=1g, $5.00 **D**=2g, $8.00
E=4g, $15.00

3736MM Mega Marconi ECO (90 days) Open-pollinated. Doug Jones has had another breeding breakthrough as he further de-hybridizes Seminis' Giant Marconi into a more compact habit while retaining the heavy early fruit set of 2½x8" tender-skinned Italian-style Lamuyo peppers. Although selected for North Carolina conditions, it produced nearly a dozen fruits per plant in our trials, grown in an open field in central Maine without black plastic. 35% of them ripened red on the plants and those were the sweetest of the strains we tried, with good texture and juiciness. They had good pepper flavor when green and were especially tasty when ripe. **BR** ①
A=0.2g, $2.70 **B**=0.4g, $4.60 **C**=1g, $8.00 **D**=2g, $12.00
E=4g, $19.00

PAPRIKA

3759BO Boldog Hungarian Spice Paprika OG (71 days) Open-pollinated. The Boldog from Hungary that doesn't bite but does dry nicely with a hint of spiciness. A prolific bearer of 4–6" long wrinkled tapered pendent fruits. Pick red and grind into sweet paprika, string into decorative ristras or enjoy fresh, although skins are a little tough. Boldog sets enough fruit to accommodate all three uses. The town of Boldog is in a well-known spice-pepper district northeast of Budapest. ①
A=0.2g, $2.00 **B**=0.4g, $3.40 **C**=1g, $6.00 **D**=2g, $8.00
E=4g, $14.00 **K**=14g, $42.00

3776FO Feher Ozon OG (90 days) Open-pollinated Hungarian heirloom. My first introduction to this extraordinary pepper was in a jar…dried and ground to a wonderfully sweet paprika. I was intrigued. The field reports didn't even consider this aspect, instead extolling Feher Ozon for incredible productivity: up to 2 dozen 3x4½" pointed light yellow fruits per plant. One trialer fed her entire neighborhood with these sweet, juicy and flavorful peppers. If you let any ripen to red, they can be dried for a delicious paprika. The beauty of this pepper as it turns is noteworthy. Beginning with the faintest red overtones blending into its yellow background, the red blush grows more pronounced as it matures. ①
A=0.2g, $2.00 **B**=0.4g, $2.80 **C**=1g, $5.00 **D**=2g, $7.00
E=4g, $11.00

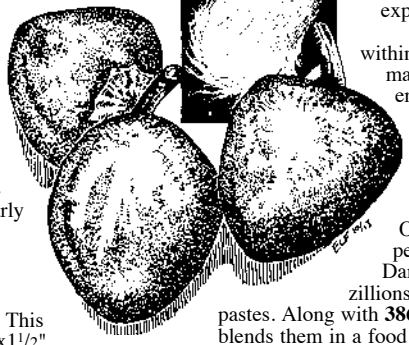
HOT PEPPERS

~120–225 seeds/g, except Thai Hot.

NEW! for 2019, hot peppers are arranged in order of days to maturity, the same as all the veggies and fruits in our catalog. Hot peppers were formerly arranged from the least to the most hot as measured in Scoville units.

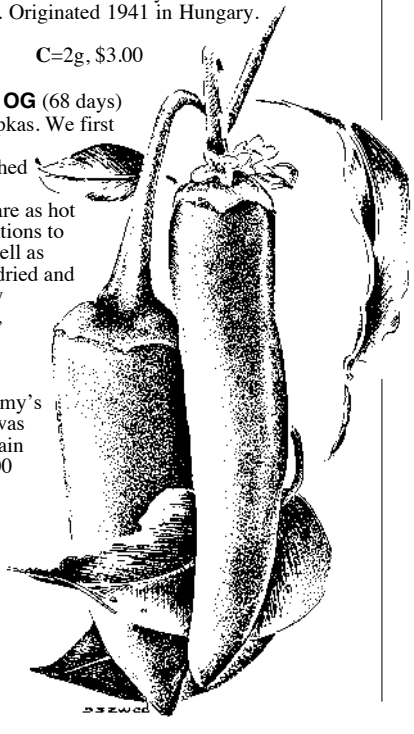
3897SH Some Like it Hot Mix (64-90 days)
Love hot peppers but lack the space to try separate packets of each? Try our blend of 5–7 different kinds all in one packet. We'll mix colors, shapes and flavors. ①②
A=0.2g, $2.10 **B**=0.4g, $3.60 **C**=1g, $6.00
D=2g, $10.00 **E**=4g, $17.00

3845PO Hot Portugal OG (64 days) Open-pollinated. Bears elongated narrow fruits, 5–8" long, 1" in diameter with the classic wrinkled hip at the stem end. Superb pepper flavor comes through its considerable heat nicely. Not as hot as **3866** Matchbox, but hotter than **3834** Early Jalapeño. Early productive ripener of glossy scarlet fruits borne on tall plants. Most will turn straight from green to red, but 4% off-types will turn from green to yellow to red. Offered by Joseph Harris in 1935. 5,000–30,000 Scoville units. ①
A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $7.00
D=2g, $11.00 **E**=4g, $18.00



3816BO Czech Black OG (65 days) Open-pollinated. Fruits so striking that seed grower Roberta Bailey kept a bowl on her table just to admire. Black when immature, the 2½"-long conical peppers ripen to lustrous garnet. Mild juicy thick-walled flesh runs with cherry-red juice when cut. The heat, a tad less than a jalapeño, is in the ribs and seeds and is "just right for many of us," says one customer. Jake Kennedy of Liberty, ME, has candied slivered Czech Blacks like citrus peel for a spicy-sweet holiday treat. Bears very early with about 20 pointed fruits per 2½–3' plant. 2,000–5,000 Scovilles. ①
A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $7.00
D=2g, $11.00 **E**=4g, $18.00

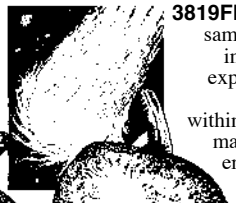
3837HH Hungarian Hot Wax (68 days) Open-pollinated. This hot one sets even in cool weather. Smooth waxy yellow 5½x1½" fruits taper to a point and ripen from yellow to orange to red. In fact, last season a Central Maine crop survived a near-fatal spring freeze after transplanting and went on to produce peppers in August. Nikos' favorite for chiles rellenos. Or pickle all three colors for a beautiful hot-pepper medley—a staple for winter sandwiches. Janine Welsby uses them in batches of her famous pepper butter. Originated 1941 in Hungary. 5,000–10,000 Scovilles. ②
A=0.5g, $1.40 **B**=1g, $2.00 **C**=2g, $3.00
D=4g, $4.50 **E**=28g, $7.50



3853BO Bulgarian Carrot Chile OG (68 days) Open-pollinated. Also known as Shipkas. We first saw this show-stopper at Amy LeBlanc's farm. Colored like a polished fluorescent-orange carrot, the thin-walled 1½–3½" tapered fruits are as hot as they look and make welcome additions to chutneys, marinades and salsas, as well as excellent hot sauces. Also delicious dried and ground. Their fruity undertone nicely complements their heat. Just 18" tall, these prolific plants bear clusters of peppers close to the main stem, an unbelievable 40–55 fruits per plant!. Brought indoors, they produced in Amy's greenhouse till February. Heirloom was smuggled here through the Iron Curtain more than 30 years ago. 5,000–30,000 Scovilles. ③
A=0.5g, $2.00
B=1g, $3.20
C=2g, $5.00
D=4g, $9.00
E=14g, $20.00

3856HO Ho Chi Minh OG (68 days) Open-pollinated. Peppers 4–5" long on 3' plants grow like large fingers turning from bright yellow to crimson in late August. Longtime Minnesota co-oper Steven Schwen sent us seeds for this beautiful shining cayenne pepper that he got in the 1980s when the first wave of boat people landed in Minnesota and came to his farm looking for chickens and ducks. He named it Ho Chi Minh in honor of the Vietnamese revolutionary who defeated all the colonialists who invaded his country. Schwen says it has a bite that makes you "run home to your mama!" We've enjoyed its prolific production (up to two dozen fruit per plant), its heat and good flavor. 30,000 Scovilles. ☙2007. ①
A=0.2g, $2.00 **B**=0.4g, $3.50 **C**=1g, $5.50 **D**=2g, $8.00
E=4g, $15.00

3825CO Carrot Bomb OG (74 days) Open-pollinated. An explosion of round 1–2" shiny bright tangerine baubles blow up the pepper patch on sturdy 2–2½" plants. The heat is comparable to a mild jalapeño but will vary with weather conditions. A bold spark in salsas, kebabs, stir-fries or the pickle jar. Selected from Bulgarian Carrot by Daniel Brisebois of La Ferme Coopérative Tourne-Sol. (See pg 73 for a profile of Daniel.) Ω ① **NEW!**
A=0.2g, $2.20 **B**=0.4g, $3.60 **C**=1g, $6.00 **D**=2g, $8.00
E=4g, $12.00

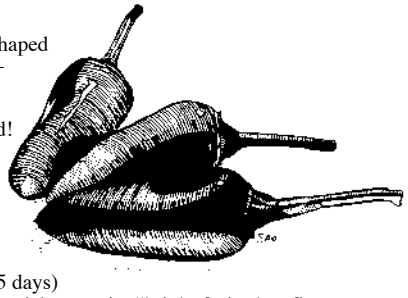


3819FB Fireball (75 days) F-1 hybrid. Like the candy of the same name, Fireball turns the inside of your mouth red. Its initial impression of sweetness is swiftly followed by an expression of searing heat. Small strawberry-shaped fruits turn from shiny green to blazing red, mirroring the fire within. Donna Dyrek's first ripened Sept. 1; additional fruits matured slowly. In mid-October her plants were still covered with peppers. 2,500–5,000 Scovilles. Resists TMV. This lot tested negative both for TMV and BLS. ②
A=20 seeds, $3.10 **B**=60 seeds, $7.50
C=200 seeds, $20.00 **D**=500 seeds, $45.00
E=1,000 seeds, $80.00

3821CY Long Red Narrow Cayenne (75 days) Open-pollinated. Often curled and twisted, the wrinkled peppers grow 5–6" long, ½" across, and taper to a point. Dark green color changes to bright red. Prolific ("produce zillions") and hot. The backbone of Hillary Nelson's red chile pastes. Along with **3866** Matchbox dries easily on screens; Holli Cederholm blends them in a food processor for crushed red pepper. Pre-1827 heirloom. Pungent; 3,500–5,000 Scovilles. ②
A=0.5g, $1.50 **B**=1g, $2.00 **C**=2g, $3.00 **D**=4g, $4.50
E=28g, $7.50

3831JO Jaluv An Attitude OG (75 days) Open-pollinated. Earth-passionate breeder Relentless blended at least three kinds of peppers into its pedigree, although it looks like a jalapeño in color, shape and size. In the breeder's own words: "If I had to have one chili on a desert island, it used to be a jalapeño. Now maybe not. This new chili is the result of a cross between an open-pollinated jalapeño and (my own) original that was called 45° N Attitude. The object was to have a thicker-skinned 45° with a lot of jalapeño flavor. The 45° N had thin skin, delicious hot fruity flavor, and dried and produced well in northern latitudes. My overriding intent in crossing them was to obtain the best combination of both." Got attitude? 2,500–8,000 Scoville units. ☙2008. BR ①
A=0.2g, $2.20 **B**=0.4g, $3.80 **C**=1g, $7.00
D=2g, $10.00 **E**=4g, $16.00

3834EJ Early Jalapeño (75 days) Open-pollinated. Hot 3x1" sausage-shaped blunt fruits mature early. Characteristic brown netting appears as fruit ripens from dark green to dark red. Packing the seed makes us teary-eyed! From Jalapa in the state of Veracruz, Mexico. 4,000 to 6,500 Scoville units at maturity. ②
A=0.5g, $1.50 **B**=1g, $2.00
C=2g, $3.00 **D**=4g, $4.50
E=28g, $7.50



3841DO Hidalgo Serrano OG (75 days) Open-pollinated. Slightly hotter than a jalapeño, its "bright fruity hot flavor lingers in the front of the mouth and makes your taste buds tingle all over," said one seed producer. Extremely prolific 3–3½' plants yield dozens of light green fruits that ripen to bright scarlet. The 2½–3 x ½" fruits, as fat as your ring finger but only as long as your pinky, have thin walls, a long seed cavity and classic serrano heat. They are perfect for fresh salsa and pickling or homemade hot sauces. 2,000–17,000 Scovilles. ①
A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $7.00
D=2g, $11.00 **E**=4g, $18.00

3866MO Matchbox OG (75 days) Open-pollinated. A product of our inventory manager Roberta Bailey's many years of dedicated breeding work to create an open-pollinated selection of the hybrid Super Chili, whose parents include Hungarian Hot Wax and Hot Banana. The squat plants bear prolific upright fruit, averaging 2" long, 1/3" across and ripening from pale green to deep scarlet. Like Super Chili, they bear well in cold damp weather, hot dry weather, sandy soils and heavy clay. They have plenty of heat and the characteristic finely cut lightweight leaves of many hot peppers. Can be potted and overwintered or brought inside to make a beautiful pepper wreath when frost threatens. 30,000-50,000 Scoville units. ☘2000. Ω ①

A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $7.00 **D**=2g, $11.00 **E**=4g, $18.00

3807AN Anaheim (78 days) Open-pollinated. Also known as California Chile and Chile Verde. Cultivated for canning in a factory near Anaheim around 1900. Anaheim is the pepper typically used for chiles rellenos. 7" long fruits tapering to a point turn from dark green to red at maturity. Pungent, but not particularly hot. 900–2,500 Scovilles. ②

A=0.5g, $1.50 **B**=1g, $2.00 **C**=2g, $3.00 **D**=4g, $4.50 **E**=28g, $7.50

3805VO Beaver Dam OG (80 days) Open-pollinated. Early for its size and a heavy producer in normal years, sets several pendulous shiny horn-shaped 6" red-orange fruits per plant, 3" wide at the shoulders, tapering to a blunt point. Both sweet and with heat. Most of its mild spice is in its ribs so you can excise those if you wish. Or leave them in to enjoy its nice peppery flavor. Karen Orso writes from California in the Eastern Sierra–Great Basin region, "Beaver Dam Pepper worked wonderfully for us this summer in our garden's 5,000' elevation in sandy loam with 5% humidity." Heirloom brought to Beaver Dam, WI, in 1912 by the Joe Hussli family. 500–1,000 Scovilles. ①

A=0.2g, $2.10 **B**=0.4g, $3.40 **C**=1g, $5.00 **D**=2g, $6.50 **E**=4g, $12.00

3849FO Fish OG (80 days) Open-pollinated. A most attractive pepper plant with distinctive green and white mottled foliage and fruits. The 2" curving pendent fruits look a little like swimming fish. They turn from white with green stripes to orange with brown stripes to red, packing considerable heat and full-bodied flavor that especially enhances shellfish. A mutation of a common serrano pepper that probably originated in the 1870s, by 1900 Fish was extensively grown by the African-American communities around Philadelphia and Baltimore. Listed on Slow Food's Ark of Taste. 2' spreading bush plants benefit from staking. *May require a little too long season for the coldest pockets*. Fish crosses readily with other peppers, requiring greater populations and more isolation than most others to remain pure. Roberta Bailey, our pepper maven, keeps selecting our stock to ensure this strain stays true. 5,000–30,000 Scovilles. ①

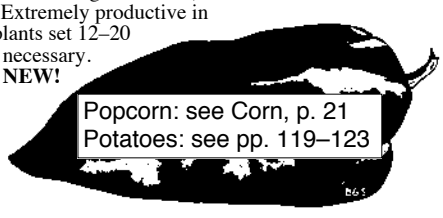
A=0.2g, $2.40 **B**=0.4g, $4.00 **C**=1g, $7.00 **D**=2g, $11.00 **E**=4g, $18.00

3860TO Thai Hot OG (82 days) Open-pollinated. Anne Elder gets 200 of these little "sweeties" per plant, "cute little compact treasures full of heat." Its small conical peppers ripen to bright red and stand erect above the foliage so fetchingly that it's grown "in the trade" as a red and green Christmas potted plant. However, devotees of hot cuisine prize its sparks. Early pinching will produce a bushy 8" plant that can be pulled, roots and all, and hung to dry for winter use or grown inside for ornamental and edible enjoyment. Thai Hot checks in around 25,000-40,000 Scoville units. ~400 seeds/g. ①

A=0.2g, $2.00 **B**=0.4g, $3.50 **C**=1g, $4.50 **D**=2g, $7.00 **E**=4g, $13.00

3811AP Caballero Ancho/Poblano (65 days green, 84 days red ripe) F-1 hybrid. This Caballero gallantly galloped up to replace Tiburon. These relatively mild hot peppers have a perfect balance of heat and sweet rich flavor in their thick flesh and ribs. Known as Poblanos when green and Anchos when dried, they are used for roasting, stuffing, making chili powder and sauces, especially the classic *mole*. Large uniform glossy very dark green 3-lobed elongated fruit (3 1/2–5" long x 3" wide) with a recessed stem will mature to a deep brick red. Extremely productive in northern climates, the 3 1/2' tall plants set 12–20 fruits per plant. Staking may be necessary. Approx. 1800 Scoville units. ⑤ **NEW!**

A=20 seeds, $2.80 **B**=60 seeds, $6.60 **C**=200 seeds, $19.00 **D**=500 seeds, $39.00 **E**=1,000 seeds, $68.00

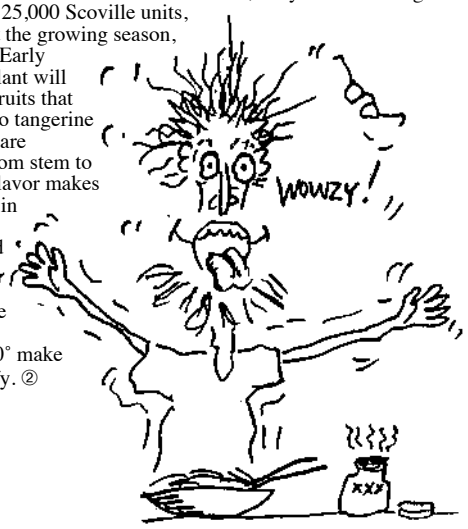


Popcorn: see Corn, p. 21
Potatoes: see pp. 119–123

3870HO Hinkelhatz OG (88 days) Open-pollinated. Not for the chicken-hearted, this rare Pennsylvania Dutch heirloom packs considerable heat. Its name aptly describes the size and shape of its 3/4x1 1/2" pendent peppers that taper to a blunt point and are covered with tiny bumps and wrinkles. Ripening from green to red, the tough skins when cut open emit a fruity redolence and reveal a thick juicy flesh. Rarely eaten raw, the peppers were traditionally used for pickling and pepper vinegar. Nearly as hot as habaneros, they do not require quite as long a season, nor are they as picky in cool environments. Plus they are compact enough to grow in a pot to bring inside for the winter. Hinkelhatz recently boarded the Slow Food's Ark of Taste. Thank you, Amy LeBlanc, for bringing it to our attention. 125,000 Scovilles. ①

A=0.2g, $2.30 **B**=0.4g, $4.00 **C**=1g, $7.00 **D**=2g, $11.00 **E**=4g, $18.00

3874HB Orange Habanero (90 days) *C. chinense* Open-pollinated. A Scotch Bonnet–type infamous for its extreme heat, fiery Habanero registers a blistering 200,000–325,000 Scoville units, depending on how hot the growing season, 30–80 times as hot as Early Jalapeño! Each 1 1/2' plant will set 10–20 pendulous fruits that turn from dark green to tangerine as they mature. Fruits are somewhat wrinkled from stem to tip. Their distinctive flavor makes them a key ingredient in West Indian jerk sauce. We recommend greenhouse culture for the northern third of our sales area where frequent nighttime temperatures below 70˚ make outdoor production iffy. ②



A=0.5g, $1.60 **B**=1g, $2.50 **C**=2g, $4.00 **D**=4g, $6.00 **E**=28g, $22.00

Hotness of peppers is expressed in Scoville units, named after Wilbur Scoville, the Englishman who in 1912 devised this system of measuring capsaicin (which causes most of the heat in peppers) in which a pepper extract is diluted in sugar water until the spiciness is no longer detectable to a panel of five tasters. The test is useful, but imprecise, as specimens of a pepper variety will vary greatly depending on growing conditions. Warm nighttime temperatures stimulate maximum development of capsaicins and increase pungency levels.

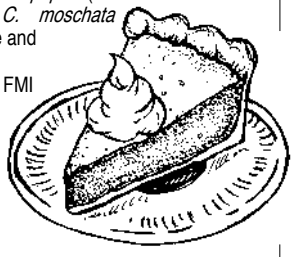
The peppers we offer, listed from mildest to hottest based on Scoville ratings:

Bell, Pimiento	0
Beaver Dam	<1k
Ancho, Poblano	1–2k
Anaheim	~1–2.5k
Fireball	2.5–5k
Jaluv an Attitude	2.5–5k
Serrano	2–17k
Long Red Narrow Cayenne	3.5–5k
Early Jalapeño	4–6k
Hungarian Hot Wax	5–10k
Hot Portugal	5–30k
Fish	5–30k
Bulgarian Carrot	5–30k
Thai Hot	25–40k
Ho Chi Minh	30k
Matchbox	30–50k
Hinkelhatz	125k
Habanero	200–325k
self-defense pepper spray	2–3M
police-grade pepper spray	5.3M
straight capsaicin	15–16M

Handle hot peppers with caution; capsaicin is highly alkaloid and can burn skin. Capsicum comes from the Greek *kapto* which means 'bite.'

Pumpkins

100–280 seeds/oz, except as noted. 1/8 oz packet sows 3–8 hills. Botanically, there are no such things as pumpkins. But we know one when we see one. "Pumpkins" listed here are three species, *Cucurbita pepo* (mini pumpkins, small pie and some jack-o'-lanterns), *C. moschata* (cheeses) and *C. maxima* (jack-o'-lanterns, decorative and culinary).



Culture: Plant 4–5 seeds/hill. Allow 6 ft between hills. FMI see p. 61, Winter Squash.

All open-pollinated except **1710 Diablo, 1725 Naked Bear, 1745 Bellatrix.**

Days to maturity are from date of seeding.

Diseases: BR Black Rot PM Powdery Mildew

See page 61 for pest and disease control.

CULINARY PUMPKINS

1711BP Baby Pam (99 days) *Cucurbita pepo* Agway pie pumpkin has deep orange color and excellent uniformity. Vine-ripens 80–90% of its fruits even in a bad squash year, so it's popular among Maine commercial growers. Fruits average 3–4 lb, slightly smaller and earlier ripening than New England Pie with the same excellent quality. ②

A=1/4oz, $1.90 **B**=1/2oz, $3.30 **C**=1oz, $6.00 **D**=4oz, $14.00 **E**=1lb, $50.00

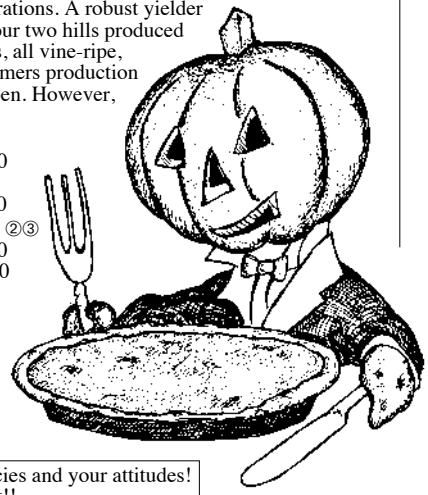
1716JD Jarrahdale (100 days) *C. maxima* Add a touch of the unusual to your squash patch with this grey-blue Australian émigré. Somewhat sparse yields of 6–10 lb heavily ribbed fruits flattened on top like pumpkins, but with much sweeter dark moist flesh. Becky McCullough of Falmouth, MA, loved its heavenly aroma when she roasted it. Anne Elder calls it "an excellent eating pumpkin, mild, stringless, quick to bake, easy to blend into a great pie." Outstanding keeper. ③

A=1/8oz, $1.90 **B**=1/4oz, $3.00 **C**=1/2oz, $4.60 **D**=1oz, $7.50 **E**=4oz, $16.00

1718WO Winter Luxury OG (100 days) *C. p.* Back in 1988 when it was maintained only by the Jung Seed Co. in Wisconsin, Mark Fulford recognized that Luxury was "3–4 times as good for pies as New England Pie." Since generating rave reviews from Amy Goldman, it has become more widely available. Uniquely russeted finely netted golden-orange skin is beautiful. Joe Hiscott of Quebec enthuses "after making pumpkin pies for more than two decades, I will say with great conviction that the Winter Luxury pumpkin is by far the BEST pie pumpkin. Best pumpkiny taste, best colour, best texture, best consistency. They have a rustic, antique look and even grow into nice manageable sizes, nothing unruly or watery. The ideal pie pumpkin!" As a result we have brought back the superior strain Hiscott lauds, maintained by Jonathan Spero (profiled on p. 18). It's definitely worth the slightly higher price. Vigorous vines bear globular 7–8 lb fruits with juicy tender slightly sweet pale orange flesh. Productive, too, but somewhat delicate and only fair keepers. ①②

A=1/8oz, $2.40 **B**=1/4oz, $4.20 **C**=1/2oz, $7.00 **D**=1oz, $11.00 **E**=4oz, $30.00

New England Pie (102 days) *C. p.* Also known as Small Sugar pumpkin. Probably selected out of Connecticut Field pumpkin by early white settlers, the standard pie pumpkin for generations. A robust yielder in good seasons. One warm year, our two hills produced more than 100 lb; the 25 pumpkins, all vine-ripe, averaged 4.26 lb. During cold summers production is lower and only half will vine-ripen. However, ripening continues during curing.



1719NE New England Pie ②

A=1/4oz, $1.40 **B**=1/2oz, $2.20 **C**=1oz, $4.00 **D**=4oz, $8.00 **E**=1lb, $20.00 **K**=5lb, $90.00

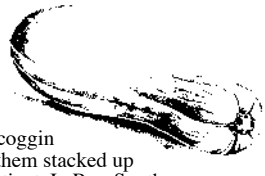
1720NO New England Pie OG ②③

A=1/4oz, $2.00 **B**=1/2oz, $3.50 **C**=1oz, $6.00 **D**=4oz, $12.00 **E**=1lb, $35.00

Varieties organized within sections by days to maturity.

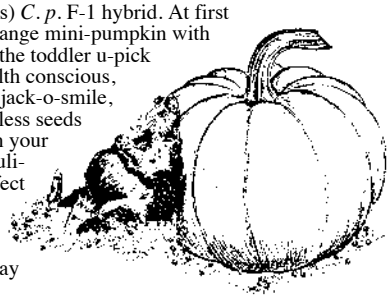
You are great! I love your policies and your attitudes! Saving Seeds is a Human Right!!
– Susanna Juon-Gilk, Merrill, WI

1723LO Long Pie OG (102 days) *C. p.* Probably a Native American variety, or selected therefrom. Various relatives have included Algonquin, Indian, Golden Oblong, and possibly St. George. The best pumpkin for Yankee pies. Though widely grown in Androscoggin county 80 years ago (an old-timer remembers them stacked up on porches like firewood), it almost became extinct. LeRoy Souther, of Livermore Falls, ME, maintained Long Pie for more than 30 years and then brought seeds to cucurbit aficionado (and now JSS plant breeder) John Navazio's Common Ground Fair booth in the late 1980s. Navazio exhibited one at the 1988 Fair, and then reintroduced it to commerce through Garden City Seeds in Montana. 3–5 lb fruits look like overgrown thick zucchinis to the uninitiated, but the telltale sign is an orange spot where the otherwise all-green elongated fruit rested on the ground. After ripening in storage, the whole fruit first blushes, then glows bright orange, signaling that its delicious smooth flesh is ready to be turned into incomparable pies. Your fork won't know where the whipped cream ends and the pie begins! Vines have enormous vigor and can achieve astonishing yields. Long Pies stored at 50° can keep all winter. Germinates poorly in cold soil. At the end of the season, small immature fruit make tasty "summer" squash. ①



A=1/8oz, $2.20 **B**=1/4oz, $4.00 **C**=1/2oz, $7.00 **D**=1oz, $12.00 **E**=4oz, $36.00 **K**=1lb, $100.00

1725NB Naked Bear (105 days) *C. p.* F-1 hybrid. At first glance, it's a cute squat 2–4 lb orange mini-pumpkin with thick stubby handles. Perfect for the toddler u-pick market, you think. But, hello health conscious, what's this? Upon carving a tiny jack-o-smile, you discover sweet and nutty hulless seeds for roasting! And, if you abandon your jack-o-lantern altogether, extra culinary congrats—you've got a perfect one-pie portion of filling as well! Did autumn just get really awesome? You betcha: Productive Petite Pepita Pie Pumpkin. Say that 10 times fast! ② **NEW!**



A=25 seeds, $4.00 **B**=50 seeds, $7.00 **C**=100 seeds, $12.00 **D**=200 seeds, $20.00 **E**=500 seeds, $45.00

1740CH Cheese (110 days) *C. moschata* Always exhibition-hall favorites, these handsome 6–12 lb wide-ribbed flattened tan fruits, 1' across or more, look like big waxed wheels of cheese. Identified by Hedrick in *Cucurbits of New York* (1937) as "one of the oldest varieties cultivated in America," a distinctive group that has "remained remarkably stable." Introduced to commerce in 1807 by McMahon. Some folks call this variety Long Island Cheese because it was once the preferred pumpkin for pies in New York, New Jersey and on the island. Bright orange meat is coarse and quite fibrous, but its sweetness redeems its textural deficiencies and it does not deserve Hedrick's terse dismissal: "quality poor." Good for baking, deep cavity lends itself to stuffing. We have found it to be a dependable producer even in our climate and unmatched as a good keeper. ③

A=1/8oz, $2.00 **B**=1/4oz, $3.50 **C**=1/2oz, $6.00 **D**=1oz, $8.00 **E**=4oz, $22.00

1743GO Good Egg Godiva OG, naked seeded (110 days) *C. p.* Legend has it that in 1057 an unclothed Countess of Mercia, Lady Godiva, rode her horse through the Coventry marketplace at midday in exchange for her husband rescinding his oppressive taxes on the people. Over 950 years later, that image still evokes protest and a willingness to speak truth to power. We are delighted to list this naked-seeded pumpkin strain selected and maintained by an excellent woman farmer. Originally bred by Allan K. Stoner of the USDA in 1972, Godiva ranges 6–12 lb with green streaks over orange base. The Good Egg Farm selection has a more uniform shape, from globe to tall globe, and superior edible seed quality. Plentiful plump dark brown hulless seeds show a good balance of mild nuttiness and underlying rich earthy potency. It's hard to stop munching on this healthy roasted snack that is full of beneficial oils, protein and zinc. *Note: Flesh is good only for animal fodder.* Start inside as transplants or direct seed once soil temp reaches 60°. Ω ①

A=1/8oz, $2.50 **B**=1/4oz, $4.50 **C**=1/2oz, $8.00 **D**=1oz, $14.00 **E**=4oz, $48.00

1745XO Bellatrix OG (100 days) *C. p.* F-1 hybrid. Expert trialer Donna Dyrek and her husband use many varieties of big pumpkins to create impenetrable viny animal control around their to-die-for sweet-corn patch. A few years ago, Donna trialed this seed before it was even introduced; the breeder labeled it "squash" and a number. At the end of the season, Donna beckoned staff trial-guy Heron to the plot: "Did you see how beautiful this is?" She and Heron have each been growing this pumpkin ever since and recommend it for catalog inclusion. Now named Bellatrix by the breeder, the sturdy ribbed round shoulders of these deep crayon-orange uniform globes contrast nicely with dark thick stems. Reliably ranging between 15–25 lbs, Bellatrix has been productive in central Maine through dry years and wet ones. The ideal Jack size and shape, it's got a broad face for you to carve a wicked smile! Intermediate resistance to PM. ④ **NEW!**

A=25 seeds, $6.00 **B**=100 seeds, $20.00 **C**=500 seeds, $75.00 **D**=1,000 seeds, $130.00

See also Specialty & Heirloom Winter Squash, pg 64

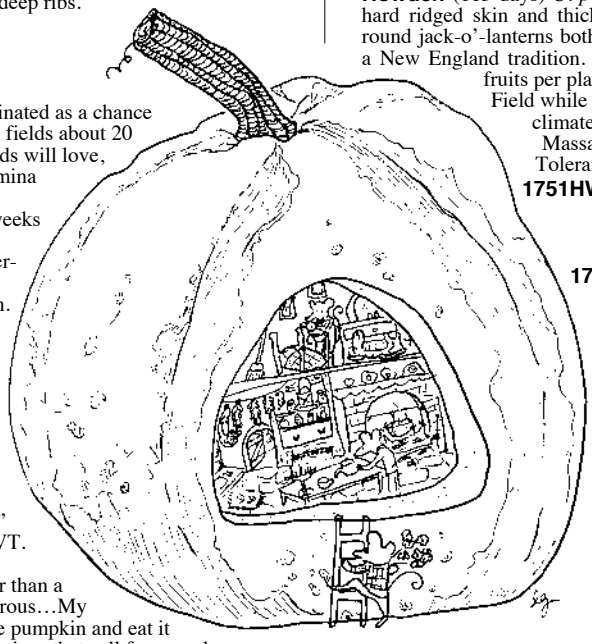
SMALL ORNAMENTAL PUMPKINS

1702WL Wee-B-Little (90 days) *C. p.* This triumph of miniaturization impressed the 1999 AAS judges. Bred to please home and market gardeners and kids everywhere. Unribbed fruits are easier to decorate than Jack Be Little. Small vines (only 6–8') produce 3–4 mini 8–12 oz fruits per plant. Fruits, more upright than Jack Be Little with darker orange rind, look just like tiny pie pumpkins and could serve as such. Sturdy dark green stems provide prickle-free handles. ~380 seeds/oz. **PVP**. ②
A=1/8oz, $2.50 **B**=1/4oz, $4.00 **C**=1/2oz, $7.00
D=1oz, $12.00 **E**=4oz, $36.00

1705JL Jack Be Little (95 days) *C. p.* Tiny ornamental pumpkins weigh only about half a pound. They're great for decorations and a big hit with kids. Flattened, heavily ribbed fruit with vigorous stems. Good to eat, excellent stuffed. Short vines, about 3–5'. Introduced by Hollar in 1987. ~380 seeds/oz. ②
A=1/8oz, $2.00 **B**=1/4oz, $3.50 **C**=1/2oz, $5.50 **D**=1oz, $9.00
E=4oz, $23.00

MEDIUM PUMPKINS

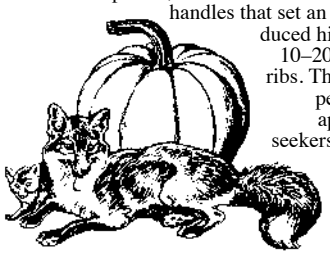
1710DB Diablo (98 days) *C. p.* F-1 hybrid. If your pumpkin program has been out-Fox'd, maybe it's time to get a handle on it by going to the devil. Tom Fox, with its massive stocky handles, has defined the recent trend in jack-o'-lanterns, but we think this devil has a more refined look; Diablo's strong 4 1/2" stems are wide at the base and taper gently upward. We liked its nicely rounded Foxy fruit shape as well as its deep orange color, its intermediate 12–22 lb size and its medium-deep ribs. Semi-determinate vines. PM tolerant. ⑤
A=1/8oz, $4.00 **B**=1/4oz, $7.00
C=1/2oz, $13.00 **D**=1oz, $24.00
E=4oz, $88.00



1713LU Lumina (100 days) *C. max.* Originated as a chance sport in one of Hollar's California pumpkin fields about 20 years ago. A lustrous ivory pumpkin that kids will love, excellent for both carving and painting. Lumina stores well if not exposed to frost, so a face painted on its smooth surface will last for weeks instead of days. Under stress, the fruit may develop blue patches. Fruits 8–10" high average 12 lb, variable depending on growing conditions. Chefs like its sweet yellow flesh. Good for puréeing or making pumpkin soup. Whether you eat it, decorate it, or both, Lumina is sure to please. ②
A=1/8oz, $2.30 **B**=1/4oz, $4.00
C=1/2oz, $7.00 **D**=1oz, $12.00
E=4oz, $32.00

1727RV Rouge Vif d'Étampes (105 days) *C. max.* Also known as Cinderella. Amy Goldman says it "coasts on its looks alone…insipid and watery." "Not so," dissents Donna Fraser-Leary of Charlotte, VT. "You do this…versatile pumpkin an injustice…While their flavor is somewhat milder than a winter squash and the texture somewhat fibrous…My daughter and I like it so much, we steam the pumpkin and eat it still in the shell. I use it in all my favorite recipes that call for squash or pumpkin." Rosalind Creasy says chefs in France use it as a base in their vegetable stock and bake garlic, onions and leeks in the pumpkin to scoop right from the shell into a Swiss cheese leek soup. While folks may disagree about its eating quality, no one can gainsay its spectacular beauty. This French heirloom turns the pumpkin patch into a glowing blaze with its decorative deeply ridged burnt-orange to red 7–30 lb flattened fruits. Because of its thin skin, not a great keeper. Originated in France in the early 1800s, named for a town south of Paris. Introduced to the U.S. by Burpee in 1883. ②
A=1/8oz, $1.90 **B**=1/4oz, $3.50 **C**=1/2oz, $6.00 **D**=1oz, $9.00
E=4oz, $25.00 **K**=1lb, $60.00

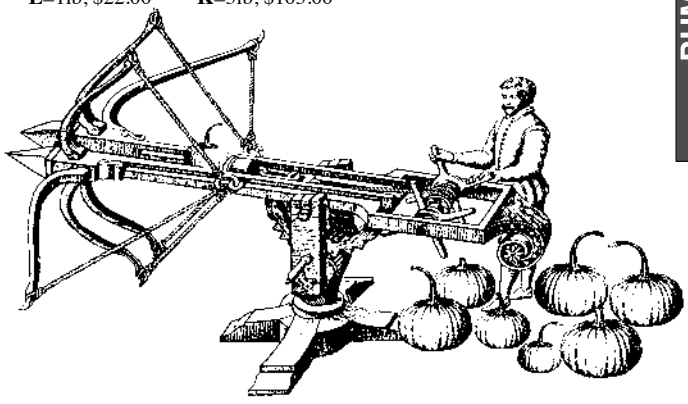
1744TF Tom Fox (110 days) *C. p.* Employing neither hounds nor horses, seeking neither sport nor kill, our purchaser Nikos Kavanya has in recent years been on a fox hunt. Denned, at last! Actually, about the only thing vulpine about this jack-o'-lantern is the name of the New Hampshire farmer who developed it, and his craftiness in breeding in such sturdy stocky handles that set an industry standard when Johnny's introduced his pumpkin in 1994. These thick-walled 10–20 lb deep orange fruits have pronounced ribs. They are not uniform in size or shape, but perhaps that variability only adds to their appeal to kids and other Halloween thrill seekers. Rampant vines, so space accordingly. Be foxy and add this classic variety to your repertoire. PVP expired. ③



A=1/8oz, $1.50 **B**=1/4oz, $2.80
C=1/2oz, $4.40 **D**=1oz, $6.40

LARGE PUMPKINS

1748CF Connecticut Field (115 days) *C. p.* Also known as Big Tom. Grown for jack-o'-lanterns and stock feed, gets 15–25 lb, sometimes more. Not uniform in size or shape. Heirloom grown by Native Americans, adopted by colonists before 1700, and a staple of 19th-century catalogs. Vick's offered for 10¢ an oz and 50¢ per lb in 1877. *Ripens for us in good years, but often we must pick green.* IR ②④
A=1/4oz, $1.40 **B**=1/2oz, $2.40 **C**=1oz, $3.80 **D**=4oz, $7.00
E=1lb, $22.00 **K**=5lb, $105.00



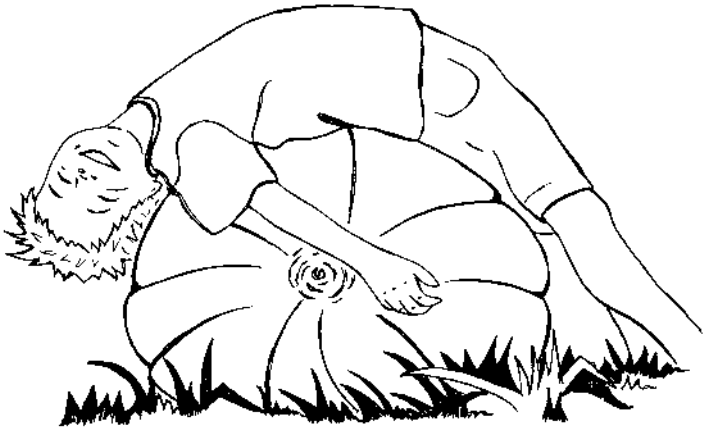
Howden (115 days) *C. p.* For 40 years Howden's symmetrical fruits with hard ridged skin and thick flesh have so much set the standard for large round jack-o'-lanterns both for fresh market and shipping that they are now a New England tradition. Large spreading vines produce 4–6 deep orange fruits per plant, typically much more uniform than Connecticut Field while weighing 20–35 lb, often able to ripen fully in our climate. Developed by John Howden in the Berkshires of Massachusetts and introduced by Harris Moran in 1973. Tolerant to BR.

1751HW Howden ②
A=1/8oz, $1.70 **B**=1/4oz, $2.80
C=1/2oz, $4.00 **D**=1oz, $5.90
E=4oz, $12.00 **K**=1lb, $39.00

1752HO Howden OG ①
A=1/8oz, $2.00 **B**=1/4oz, $3.50
C=1/2oz, $6.00 **D**=1oz, $8.00
E=4oz, $20.00 **K**=1lb, $53.00

1757BM Big Max (120 days) *C. max.* These are big pumpkins. Not big enough to compete in giant-pumpkin contests (you'd need Dill's Atlantic Giant, not offered by us) but certainly sufficient for exhibiting in your county fair or for displaying as an awesome jack-o'-lantern. Typically weighs 50–100 lb and measures up to 70" in circumference! ④
A=1/4oz, $1.70 **B**=1/2oz, $2.80
C=1oz, $4.50 **D**=4oz, $9.00
E=1lb, $30.00

Radicchio: see Greens, pg 29



Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

Radishes

Raphanus raphanistrum subs. *sativus*

Culture: Summer radishes may be sown almost as soon as the ground can be worked. They emerge rapidly and grow quickly. Sow 1–2" apart, and thin to at least 2" for attractive uniform roots. Use row cover to protect from flea beetles. They develop more pungency in dry heat than in cool moist weather. Ready for harvest at about the size of a quarter and will rapidly get woody if allowed to grow much larger. Minimum germination temperature 40˚, optimal range 55–85˚.

Disease: FY Fusarium Yellows

Note: Cannot ship larger than half oz. packets of radishes to the Willamette Valley due to quarantine.

Days to maturity are from date of seeding.

RED ROUND RADISHES

~2400-3200 seeds/oz. Open-pollinated except 2212 Gloriette and **2243** Cheriette**.**

2212GL Gloriette (24 days) F-1 hybrid. Top performer in our hybrid radish trials for their uniform bright red globe-shaped roots. Snow white flesh was crisp, mild and juicy, not becoming pithy even as it developed more heat later on. Strong medium-sized tops good for bunching. Good shelf life after harvest, extending their glory on the table. Tolerates FY. ⑤
A=1/8oz, $1.90 **B**=1/2oz, $3.50 **C**=1oz, $5.50 **D**=4oz, $20.00
E=1lb, $65.00

2214CB Cherry Belle (25 days) Good smooth red-skinned bunching radish making balls 3/4" across with firm white flesh. Some variation in our observation plots. 1949 AAS. ②④
A=1/8oz, $1.40 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $5.00
E=1lb, $13.00 **K**=5lb, $55.00

2234CH Champion (25 days) Smooth scarlet roots with firm mild flesh grow quickly to edible size. Crunchy and juicy. 1957 AAS. Some variation in our trials, but one customer said "best radish I've grown in 40 years." Do not crowd. Thin, thin, thin! ②④
A=1/8oz, $1.30 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $5.00
E=1lb, $13.00 **K**=5lb, $60.00

2243CT Cheriette (26 days) F-1 hybrid. Vibrant scarlet skins with crisp sweet white flesh. Sizing up more slowly than **2212** Gloriette, they showed the best field-holding quality in the trial and had the sweetest flavor with a mild tang. All 10 round slightly oval specimens in the sample were acceptable, 9 of them sufficiently uniform to be marketable. A higher yielder and stands heat better than any of our OP selections. Short tops. ⑤
A=1/8oz, $2.20 **B**=1/2oz, $4.00 **C**=1oz, $7.00 **D**=4oz, $22.00
E=1lb, $80.00

Gleanings from our Seed Growers (part 5)

Karen Morton, of Shoulder-to-Shoulder Farm in Oregon, understands the seed business as a family affair. It was something she and Frank (see page 33) could do from home and that the kids could be a part of. Their two sons are no longer at home, but they come back at Christmas to help with computers and mechanical stuff and photos for the catalog.

Those photos are a throughline in Karen's work, since she started with a career in wildlife photography, a job she held, in part, because she's always liked being outside, working outside. So when she met Frank and they re-started a high-end salad business on their new land, it was an easy fit. But she knew their niche in the salad business wouldn't last forever. "Seed is a lot more interesting than salad," she said.

Reflecting on that a bit more, she said, " I love the diversity of seed, their different shapes are amazing. Different strategies like dormancy and vernalization show us the complexity of life every day. I like the diversity of the work involved in growing, harvesting, cleaning seed, creating the catalog and the organization required to keep track of hundreds of lots of seed. I like the meditative work of screening and winnowing seed, by hand, outside in the wind. I like being in business with organic farmers and gardeners who are connected to the planet in a real cold, dirty, hot and sweaty hands-on way to the health of our soil, water and air. Real Stuff that matters to the future for our children."

When asked to pick her favorite seed to grow, Karen said, "I do love lettuce." (They list 150 varieties in their catalog.) "It grows well, germination-tests well, and it's easy to clean. Chicory and endive, too, are not too difficult. Well, I love all the plants, just *not* always their seeds. For example, I love calendulas but they have so much anxiety attached to them … dormancy, big seed/little seed; they're hard to harvest, hard to clean. It's the diversity of plants that is awesome and fun."

The main challenges come from having employees: finding the right people, training them, keeping them. And keeping organized as the business gets bigger is also a challenge.

"We started out lucky, coming in at the leading edge of organics. And it helped having a vision to create more and more diversity while selecting for what we wanted, at a time before we had all the diversity we have now. I would ask, 'What lettuce would I like to grow, what lettuce would I like to eat?' And then we would grow to our taste, what we wanted."

With distilled clarity she offers this advice to seed growers: "Watch. Watch your plants. Watch how you clean seed. Be really observant of the plants and their conditions. There's a lot to pay attention to."

UNCONVENTIONAL COLORS

~2400-3200 seeds/oz. All open-pollinated.

2224EE Easter Egg (25 days) These good-sized delicious radishes do not become woody, hollow or too hot. Nor do they bolt easily. Kids and adults love this fascinating blend with shades of pink, purple, red, violet and white. Always our most popular radish among home gardeners and favored by market growers for bunching. ⑤
A=1/8oz, $1.70 **B**=1/2oz, $2.80 **C**=1oz, $4.00 **D**=4oz, $8.00
E=1lb, $22.00

2230PL Pink Lady Slipper (25 days) Named for the large showy wildflower that is listed as "of concern" in the Native Plant Protection Act, this is one Lady Slipper you can uproot with abandon. We've been on the trail of a good pink radish for years, but not quite finding the right one in our trials until now. Pink Lady Slipper has the beauty of a soft rosy-pink color combined with bright white flesh that is crisp and mild. The oblong plump roots, blunt at the tip and with a small taproot, hold longer than others without cracking or getting soft and pithy. Stays crisp for weeks after harvest. ② **NEW!**
A=1/8oz, $1.70 **B**=1/2oz, $3.00 **C**=1oz, $4.00 **D**=4oz, $8.00
E=1lb, $22.00

2240HS Hailstone (25 days) The only hailstone we want to see on the farm. Vaughan, in 1904, called it "the quickest growing radish on record," and described it as round, smooth, snowy-white with a short tender taproot. Produces crisp juicy roots 1" in diameter that hold well and have some heat. Unusually small foliage but intolerant to crowding. ③④
A=1/8oz, $1.70 **B**=1/2oz, $3.00 **C**=1oz, $5.00 **D**=4oz, $11.00
E=1lb, $32.00

2245PO Pearl OG (25 days) Indeed, a harvest of these uniform flawless snow-white 1–1 1/2" round radishes looks like a string of matched pearls. Both tender skin and mild sweet melting interior distinguish Pearl from standard radish texture and taste, while the vigor and strong tops make it an easy choice for garden and bunched market. The hot dry spring and early summer of 2018 demonstrated its excellent crack resistance. Through continual care and selection, OP varieties such as this Pearl truly are edible treasures. ④ **NEW!**
A=250 seeds, $3.00 **B**=500 seeds, $4.60
C=2,000 seeds, $11.00 **D**=10,000 seeds, $43.00

2248FB French Breakfast (26 days) Favored in Paris markets since before 1879, and our best-selling radish in the larger sizes. "A medium-sized radish, olive-shaped, small top, of quick growth, very crisp and tender, of a beautiful scarlet color, except near the tip, which is pure white. A splendid variety for the table, on account of its excellent quality and its beautiful color."—From D.M. Ferry & Co's Descriptive Catalog, 1902. Gets pithy earlier than many others. ⑤
A=1/8oz, $1.50 **B**=1/2oz, $2.20 **C**=1oz, $3.30 **D**=4oz, $7.50
E=1lb, $19.00 **K**=5lb, $85.00

2253PO Plum Purple OG (26 days) This popular plum-colored round radish, almost the size of a ping-pong ball, has recently been reselected for more uniformity. Crisp white flesh has a good sweet taste with only a little heat. One customer who grows radishes under row covers to avoid root-maggot damage calls Plum Purple the radish most tolerant to slightly shaded row-cover conditions. *Check our website: larger sizes may become available.* ③
A=1/8oz, $2.00

2257ZT Zlata (30 days) A new color in summer radishes; these shimmery yellowish-tan russeted medium-sized beauties from Poland starred in our trial. Crunchy and crispy white interiors, spicy but not overwhelming, good fresh and even better braised. Its light-textured leaves make good young greens. Did not bolt or split and held quality even throughout June rains. Perfect for bunching. ②
A=1/16oz, $2.50 **B**=1/8oz, $4.50 **C**=1/2oz, $10.00 **D**=1oz, $16.00
E=4oz, $50.00

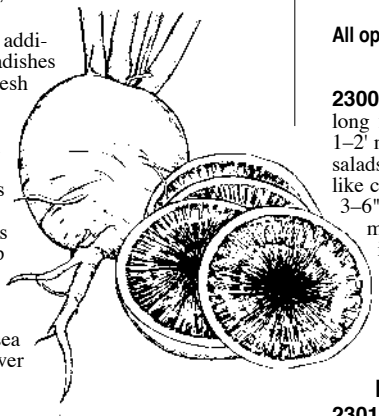
2262WI White Icicle (30 days) Also known as Lady Finger, an heirloom listed by Fearing Burr as White Naples, White Italian and White Transparent. Firm tender all-white roots for the home garden will grow down 4–6" in all but the heaviest soils. Also used for bunching by commercial growers. Mild if harvested when young and slender, and remains in good eating condition longer than most other summer radishes. Juicy and somewhat spicy. ③④
A=1/8oz, $1.40 **B**=1/2oz, $2.50 **C**=1oz, $3.00 **D**=4oz, $7.00
E=1lb, $14.00 **K**=5lb, $60.00

Culture: A favorite for children's gardens because they're quick and easy to grow with minimal fertility requirements.
Culinary: Parboil the greens and roots separately, then dress and toss them together for very early spring salad. And the pot liquor, mmmm…

WINTER RADISHES

~2100-2900 seeds/oz. All open-pollinated.

Culture: Slower-growing than the quick summer kind, with many growing deeper roots than summer radishes, often cylindrical in shape. Thin to 6" apart. They hold much longer than summer radishes but if they start to bolt, pinch off the tops. Ideal in September and October from an early July planting, and can be stored for winter.



2265WR Watermelon (55 days) A welcome addition to any winter vegetable collection, these radishes will please with their consistent sweet tender flesh and brilliant color display. Like its namesake, Watermelon reveals its sweet smooth bright rose flesh once you slice through the green and white skin. Growing to a robust 2 1/2" diameter in just 45 days, these precocious winter keepers are best suited for a mid-late July sowing. At full maturity, the attractive 4" long oblong roots will store for months in the root cellar and keep their vibrant colors even when cooked. Selected from among 6 strains for their uniform coloring and daikon leaves. A real treat sliced, topped with farm butter and a pinch of sea salt. "Fast and delicious" sums CT market grower Bryan O'Hara. ③

A=1/8oz, $1.70 **B**=1/2oz, $3.00 **C**=1oz, $5.00 **D**=4oz, $11.00 **E**=1lb, $40.00

2266MB Munchener Bier (55 days) The perfect accompaniment to a good dark beer. Germans traditionally serve these mildly pungent large white tapered roots sliced thin and salted to go down with their brew, but the radishes are equally good sautéed and then salted. Gives a double harvest because the tender 2–3" aerial seedpods are good in salads and stir-fries. ②

A=1/8oz, $1.90 **B**=1/2oz, $6.00 **C**=1oz, $10.00 **D**=4oz, $28.00

2269MO Misato Rose OG (60 days) Also known as Chinese Red Heart radish, described in its native land as *xin li mei,* meaning 'in one's heart beautiful.' A unique selection from a hybrid, with two variations so about half have light greenish-tan outer skins and light green stems and leaf veins, the remainder medium-rose outer skins, rose stems and leaf veins. The roots of both types have the characteristic rose flesh, the ones with the darker skins having darker and more pungent hearts. Both are fine tasting and good looking, with plenty of spiciness, a rich sweet vegetable undertone and no harsh sharpness. Will grow as large as a big beet if given sufficient space. For autumn crops, a good keeper. ①

A=1/8oz, $2.20 **B**=1/2oz, $6.00 **C**=1oz, $9.00 **D**=4oz, $26.00 **E**=1lb, $90.00

2270BS Round Black Spanish (65 days) For some real heat, try a slice of the venerable Black Spanish. Turnip-shaped 4" roots with corklike black exteriors have extremely pungent white flesh that loses some heat when boiled or stir-fried. Can be stored in the root cellar like carrots and beets in slightly moistened sand or layered into damp raked leaves. Dates back to the 16th-century conquistadors. ④

A=1/8oz, $1.30 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $5.00 **E**=1lb, $14.00

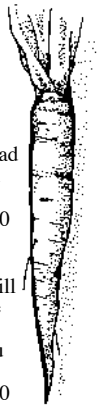
DAIKON RADISHES

~2900-3000 seeds/oz.

Daikon means 'big root' in Japanese. See also **Saisai Leaf Radish and Rat-tail Radish Pods in the Asian Greens section, p. 33.**

2277MP Mini Purple (50 days) F-1 hybrid. Wide plumb-bob–shaped 5" by 2 1/2" roots with gorgeous bluish-purple skin and greenish-purple shoulders are "mini" only when compared to long white types. Topped by vibrant dark green leaves with short stems blushed purple-pink. Interior flesh is ringed deep purple with streaks through white meat merging into a purple sunburst core. All sizes, from 3" up to the 9" bombs, have excellent crunchy tender raw texture and mildly spicy flavor. When cooked, Mini becomes firm, sweet and savory with tangy hints of rutabaga. *Note:* expect 10% green-shouldered white off-type roots of same flavor and texture. ⑤

A=1/16oz, $3.20 **B**=1/8oz, $6.00 **C**=1/2oz, $15.00 **D**=1oz, $26.00



2268GO Green Meat OG (55 days) Open-pollinated. Unique miniature daikon radish with striking lime-green flesh grows 6–9" long and 1–3" wide. The above-ground exposed shoulders turn a deep green while the tips remain white. Fine-grained, crisp and sweet. Carter says it has a "distinct green-apple flavor." Used in Asia for salads, cooking and pickling. David Nonnenmacher suggests trying a slice on homemade bread slathered with butter. Green Meat and **2269** Misato Rose keep in his root cellar until May. ①

A=1/8oz, $2.30 **B**=1/2oz, $6.00 **C**=1oz, $9.00 **D**=4oz, $30.00 **E**=1lb, $110.00

2285ST Saitaro (69 days) F-1 hybrid. Similar to Winter Light in size, Saitaro's thick uniform 9–12"-long root tapers to a blunt point. Its rise will be steady and slow bolting, vigorous tops shading the nice-looking white roots with light green tinted shoulders. With very smooth silky texture cooked and a nicely spiced crunch when raw, this one is sure to have you saying *oishii desu ne* ("ohee-SHE-des-nay"). Resists FY. ⑤

A=1/16oz, $3.20 **B**=1/8oz, $6.00 **C**=1/2oz, $15.00 **D**=1oz, $28.00

RANDOM ROOTS

All open-pollinated.

BURDOCK *Arctium lappa*

2300TG Takinogawa (120 days) Treasured by the Japanese, who call its long fleshy aromatic taproot *gobo*. The standard Japanese variety, setting 1–2' mild earthy-tasting bittersweet roots. Small roots are peeled and used in salads; larger roots are good in stir-fries, soups and wild ferments. Culture like carrots, working the soil deeply, direct-sowing in spring and thinning to 3–6". Harvest in fall or early next spring. Burdock has a long history as a medicinal. Herbalist Deb Soule says burdock root, whether eaten or used in a tea or tincture, nourishes the liver and kidneys, balances digestion, helps the skin, and is useful in anti-cancer remedies. Think about that the next time you run into burdock as a common weed dispensing its burrs. ~1,650 seeds/oz. ⑤

A=1/8oz, $2.50 **B**=1/2oz, $8.00 **C**=1oz, $12.00 **D**=4oz, $40.00

ROOT PARSLEY *Petroselinum crispum*

2301AR Arat (88 days) Enhance your soups and specialty dishes with these nutty-flavored roots redolent of a parsley-celery combination. Sweeter and more uniform than Hamburg, these roots are whoppers: they fill out well and grow almost a foot, benefiting from a deeply worked seed bed. You can sustain a harvest through much of the winter and possibly into spring if you protect them. Young flat parsley leaves also add zest. ~25,000 seeds/oz. ④

A=1/16oz, $2.60 **B**=1/8oz, $4.80 **C**=1/2oz, $14.00 **D**=1oz, $24.00 **E**=4oz, $90.00

SALSIFY *Tragopogon porrifolius*

2318GG Gammel Gotlandsk ECO (120 days) Biennial. Also known as oyster plant, its flavor bearing only the most fanciful resemblance to that of the bivalve mollusc. This variety came to us from our friends at Runabergs Froer who described it as "the best" in their trials. Nikos agrees it is the best and highest-yielding salsify she's ever seen. Its name means 'old from the Island of Gotland,' the largest island off the coast of Sweden in the Baltic Sea. Similar to **2322** Scorzonera, sporting one long 8–9" taproot, described by Barbara Damrosch as having "tan and shaggy" bark concealing its snow-white interior. Thicker than a pencil but much thinner than a carrot. May be wintered over like a parsnip and harvested in the spring before it goes to seed. Comes up like a big grass clump; thin the plants for adequate room. In the second year each plant sets dozens of little purple daisy-like blossoms that open to 4" puffballs. ①

A=1/8oz, $5.00 **B**=1/2oz, $16.00

SCORZONERA *S. hispanica*

2322NR Noir de Russie (120 days) Biennial. *Scorzonera* derives from the Spanish *corteza negra* or 'black bark.' Long narrow dark-skinned white-fleshed root is a good source of iron, phosphorus and calcium. Although not handsome, it is prized by chefs in Europe for its distinctive flavor, and used like potatoes in *haute cuisine*. Much of the flavor resides in the dark skin so do not peel before cooking. Has a firm smooth texture, not sweet like many root vegetables. Culture like parsnips, overwintering in the field and pulling as needed. Flavor improves after a hard frost. Has only limited storage in root cellars, nor does it can or freeze well, so use right after harvest. Seed is short-lived; germ test old seed in paper towels before sowing. ~2150 seeds/oz. ②

A=1/8oz, $1.80 **B**=1/2oz, $4.00 **C**=1oz, $7.00 **D**=4oz, $24.00 **E**=1lb, $80.00

SKIRRET *Sium sisarum*

2327SK Skirret ECO (120 days) Perennial. Native to China, skirret arrived in Europe during classical times, probably brought to the British Isles by the Romans. If you like parsnips, you'll probably like skirret. Relatively low yielding, dainty and delicate to prepare, this is not a commercial crop. All the better for the home gardener. Skirret roots may be harvested in fall, but are customarily overwintered for their sweet nutty flavor enhanced by cold weather. In the kitchen, skirret needs a light touch; it's best eaten raw or fried simply in butter. Skirret makes a bundle of swollen greyish-white roots from the crown, each much thinner than a parsnip. Unfussy in most soils, it has an affinity for wet or boggy land where most other vegetables drown, and it can stand the toughest winters. Grows longest and straightest in sandy soil, up to 1' given adequate moisture. The widest will be almost the diameter of a pinkie. Culture like celery, starting indoors 8–10 weeks before setting out, or direct seed in spring. It can take spring frosts and transplants well. Thin to 1' apart as the umbelliferous plants will grow 3–6' and need staking if you wish to save seed. Skirret can also be propagated from root cuttings. ① **BACK!**

A=0.2g, $1.70 **B**=1g, $3.60 **C**=4g, $11.00

SPINACH

Spinacia oleracea

~1500–2800 seeds/oz.

Culture: Very hardy, spinach prefers cool temps. Spinach should be planted as soon as the ground can be worked in spring to avoid early bolting. For fall crop, try late July–Aug. sowing; to overwinter, sow late Aug.–Sept. Heavy feeder, but note that applying high-nitrogen fertilizers to spinach shortly before harvest can cause high nitrate levels in the leaves. Pick large leaves often for heavier production. Smooth-leaved spinach is easier to wash than the semi-savoyed type and is increasingly preferred. Heat, crowding and long day-length (more than 14 hours) trigger bolting. To retard bolting, avoid hot-weather planting, use wider spacing, and irrigate or use shade cloth.

The use of hardy varieties, cold frames, row covers and hoophouses has made spinach into a nearly year-round crop for gardeners and farmers. Growers should rely on **2510** Space or **2539** Oceanside for winter production.

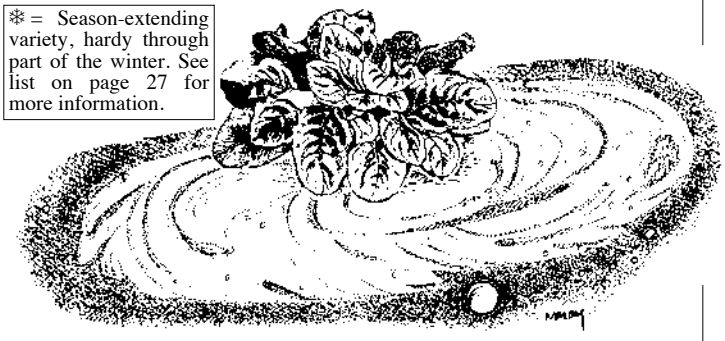
Minimum germination temperature 35˚; optimal range 45–65˚. Spinach seed will not germinate in soil temperatures above 85˚.

Days to maturity are from date of seeding.

Diseases:

BM Blue Mold
CLS Cladosporium Leaf Spot
CMV Cucumber Mosaic Virus
DM Downy Mildew

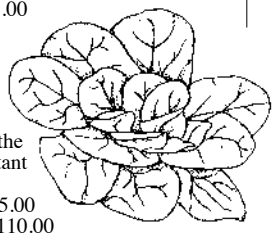
❄ = Season-extending variety, hardy through part of the winter. See list on page 27 for more information.



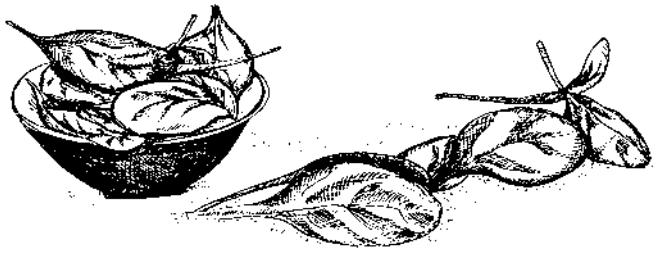
2510SP Space (37 days) F-1 hybrid. We regularly sell more than 3,500 packets per year! Produces the kind of vigorous big thick wavy mostly smooth slightly savoyed leaves that market growers love and restaurant chefs adore. Relatively long-standing when sown in early spring. Vigorous at all times, it was the quickest to mature from a fall planting. Upright growth results in good clean dark green leaves with a juicy sweet taste. We've heard rumors of Space's intended demise so don't Space out: stock up! Resistant to DM1,2,3,5,6,8,11,12 and some resistance to CLS. ❄ ④

A=1/4oz, $1.90 **B**=1/2oz, $3.20 **C**=1oz, $5.60
D=4oz, $11.00 **E**=1lb, $29.00 **K**=5lb, $135.00

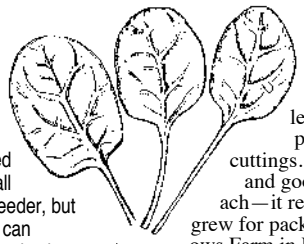
2512LY Olympia (38 days) F-1 hybrid. An outstanding performer for the fall crop and early winter, Olympia grows fast, producing enormous yields of mostly smooth leaves up to 5x6". Almost entirely lacking in oxalic-acid taste, the mild flavor is paired with lush texture. But Olympia can't stand the heat and bolts quickly when planted in spring. Resistant to DM1,2,3,5,8,9,11,12,14, possibly 16. ❄ ⑤



A=1/4oz, $1.70 **B**=1/2oz, $2.80 **C**=1oz, $5.00
D=4oz, $9.00 **E**=1lb, $24.00 **K**=5lb, $110.00



DM in this section refers to **Downy Mildew** caused in spinach by *Peronospora farinosa* f. sp. *spinaciae*. This pathogen evolves new races at a fast clip, challenging breeders and growers worldwide to keep up. Resistant varieties are the main management tool. While formerly considered Somebody Else's Problem, spinach DM has popped up here and there in the Northeast on a seemingly random cross section of spinach varieties. Most cases have been in protected winter crops. Researchers such as Dr. Meg McGrath of Cornell, along with regional seed companies, are tracking these occurrences with hopes of more knowledge before it becomes a major problem. Stay tuned! Until then, good info and visual spinach-disease primers can be found at: http://mtvernon.wsu.edu/path_team/spinach.htm http://vegetablemdonline.ppath.cornell.edu/NewsArticles/SpinachDownyMildew.html



2538AV Avon (42 days mature, 20 to baby leaf) F-1 hybrid. Cosmetic allure alone could not succor us in the loss of star performer Tyee. Luckily, Avon came calling. This vigorous semi-savoy matures large broad dark green leaves with mild sprightly sweet flavor. Tender leaf and stem pair well with an upright spreading habit for easy baby-stage cuttings. Avon holds well in June heat and keeps its pleasing texture and good looks as the days get shorter and cooler. "Love this spinach—it really IS a good substitute for Tyee, which is what we always grew for pack sales," reported Lisa and Howard Prussack of High Meadows Farm in Putney, VT. "Vigorous and holds up well if not over-heated or under-watered." We found Avon's DM resistance is not adapted to overwintered protected culture. Resistant to DM1,2 and CMV. ⑤

A=1/4oz, $1.90 **B**=1/2oz, $3.00 **C**=1oz, $5.00 **D**=4oz, $10.00
E=1lb, $30.00 **K**=5lb, $135.00

2539CE Oceanside (45 days mature, 25–30 to baby leaf) F-1 hybrid. Like the amazing smooth surfing waves in Oceanside, CA, the leaves of this spinach just keep on coming. Thick but tender, very dark green smooth round oval leaves are upright, perfect for the baby cut. At full maturity, large broad leaves still give excellent silky texture and mild sweet flavor. With our erratic Maine summers, we prize bolt tolerance above all else, and Oceanside delivered in style, even beyond what legendary Tyee could muster. Oceanside holds leaf quality, strong color and great taste for more than a month, barely showing signs of going by in early August. The winter crop in Anne Hallee's 2018 hoophouse trial was stunning. A little slower to size up in deep cold than Space, but Oceanside's consistent performance might be the answer to hardiness and disease concerns growers are struggling with. High resistance to DM races 1-9,11,13,15,16,17 & isolate UA201621A. Intermediate resistance to DM races 12,14. ⑤

A=1/4oz, $2.10 **B**=1/2oz, $3.50 **C**=1oz, $5.50 **D**=4oz, $13.00
E=1lb, $36.00

Bloomsdale (42 days) Open-pollinated. This classic savoy-leaf spinach pleases with its excellent rich flavor and fully crinkled crumpled form. Much better in fall than in spring when it bolts in the heat. Recent hybrids surpass it in production and bolt resistance. David Landreth, founder of the Landreth Seed Company, developed the original Bloomsdale Spinach, forerunner of this type. ❄

2540LS Bloomsdale ②

A=1/4oz, $1.40 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $6.00
E=1lb, $12.00 **K**=5lb, $55.00

2541BO Bloomsdale OG ③

A=1/4oz, $2.10 **B**=1/2oz, $3.60 **C**=1oz, $5.80 **D**=4oz, $15.00
E=1lb, $37.00 **K**=5lb, $180.00

2555GW Giant Winter (45 days) Open-pollinated. Selected for its cold hardiness, Giant brings bountiful harvests late fall to early winter in high tunnels. The large medium-green semi-savoyed leaves overwinter well under mulch. Great flavor and melting texture. Bear in mind midwinter tunnel regrowth for multiple cuttings is slow, and DM resistance is nil.❄ ②

A=1/4oz, $2.00 **B**=1/2oz, $3.30 **C**=1oz, $3.80 **D**=4oz, $8.00
E=1lb, $24.00

2558WO Winter Bloomsdale OG (47 days) Open-pollinated. This superior strain is much slower to bolt in June than standard Bloomsdale, and the dark green savoyed leaves can handle winter in northern hoophouses. Good for single cuttings in cold conditions, with slower regrowth than hardy hybrids. Slower growing and more spreading in habit than standard Bloomsdale, but the full flavor and tenderness has not been sacrificed. Definitely worth a try overwintering under mulch in the stark snowy outdoors. Resistant to CMV and BM, but not to DM. ❄ ①

A=1/4oz, $2.20
B=1/2oz, $3.80
C=1oz, $7.00
D=4oz, $18.00
E=1lb, $60.00
K=5lb, $280.00

Spinach Substitutes: see pg 30.

Thanks for your great products and the coolest, most informative catalog on earth!
– Don Cameron, Gardiner, ME

Summer SQUASH

Cucurbita pepo

~200–320 seeds/oz for yellow, patty pan and Lebanese summer squashes; ~160–240 seeds/oz for zucchini.

Culture: Tender, will not survive frost. Sow in hills 4' apart, 5 seeds/hill. Thin to 2–3 best plants. Floating row covers, especially when used in low tunnels, provide extra heat and can hasten maturity by 1—2 weeks. Don't leave oversized squash on the vine; it shuts down production. Make succession plantings to ensure harvest through the entire frost-free season, insurance against powdery mildew and other diseases of tiring old plants. For best flavor pick summer squash when they are small.

Minimum germination temperature 60˚, optimal temperature range 70–90˚.

Pests & diseases: See page 61 for additional information.

PM Powdery Mildew
WMV Watermelon Mosaic Virus
ZYMV Zucchini Yellows Mosaic Virus

Days to maturity are from date of seeding.

YELLOW

1504SF Saffron (42 days) Open-pollinated. We're just mad about Saffron, a 4–6" butter yellow semi-crookneck that excelled in our trials and has developed a strong following among our customers. Prolific, sweet and tender. Less warty than straightneck squashes. Small single-stem bush with open structure but very large leaves gives good sunburn protection. ②

A=1/8oz, $1.50 **B**=1/4oz, $2.20 **C**=1/2oz, $4.00 **D**=1oz, $7.00
E=4oz, $15.00 **K**=1lb, $32.00

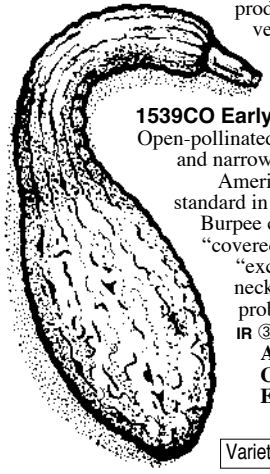
1507GT Gentry (43 days) F-1 hybrid. Despite its name, this crookneck is not just for the 1%. Though one upscale squash with its butter-yellow smooth skin, mild sweet delicious flavor, and impressive production even under stress, our price keeps it attainable for the 99%. Best harvested at 5–6". Our trialer called it "the perfect crookneck." Now if only we could rein in the corporate crooknecks, we might all realistically aspire to be gentry! ⑥

A=1/8oz, $3.00 **B**=1/4oz, $5.00 **C**=1/2oz, $8.50 **D**=1oz, $15.00
E=4oz, $50.00 **K**=1lb, $175.00

1512SP Slick Pik YS 26™ (48 days) F-1 hybrid. What is slick about this pick is its extreme earliness and its consistent prolific production of slim glossy-skinned 8" fruits. These have minimal bulges or swellings for their seed cavities, long straight necks and excellent flavor. Very attractive and spineless, too. They have resisted heavy cucumber and squash beetle pressure at Roberta's farm for many years and have always been the last to succumb to wilt. Another fine breeding achievement by Brent Loy at the University of New Hampshire. ②

A=1/16oz, $2.80 **B**=1/8oz, $4.80 **C**=1/2oz, $12.80 **D**=1oz, $21.00
E=4oz, $73.00

1526ZP Zephyr (54 days) F-1 hybrid. Its unique contrasting color pattern is as refreshing as the breeze its name evokes. Looks like a yellow squash dipped in pale green at the blossom end. Sometimes earliest fruits are yellow with green stripes. A straightneck type often with a slight curve at its neck—the product of the yellow crookneck in its breeding. Also has yellow acorn and delicata squash in its background. Large plants with open habit are easy to harvest. Deborah Jaffe of Long Days Farm in S. Cambridge, NY, likes to sell baby Zephyrs by the pint. We prefer them at the 4–6" stage. Excellent grilled. Customers, particularly market growers, asked us for it ever since Johnny's introduced it in 1999. "Tastes great, produces #1 squash like crazy all summer and looks very pretty," summed one. Feel the breeze! ③



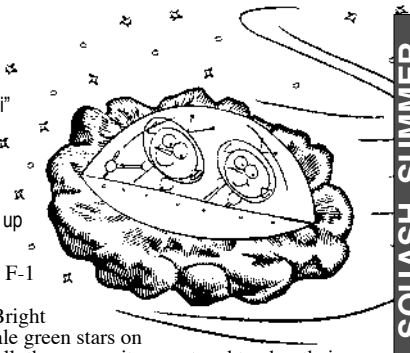
A=1/16oz, $3.00 **B**=1/8oz, $5.80
C=1/4oz, $11.00 **D**=1oz, $24.00
E=4oz, $90.00

1539CO Early Summer Yellow Crookneck OG (58 days) Open-pollinated. Deep yellow warted fruits with bulbous shape and narrow curved necks. Best when picked young. Native Americans grew it in the Northeast before it became a standard in early 19th c. American seed catalogs. The 1888 Burpee catalog rather uncomplimentarily described it as "covered with warty excrescences" but called the flavor "excellent." We have returned to the standard crook necked variety we used to sell and have dropped the problematic improved variety of the past two years. IR ③ **BACK!**

A=1/8oz, $1.80 **B**=1/4oz, $3.00
C=1/2oz, $5.00 **D**=1oz, $8.00
E=4oz, $15.00 **K**=1lb, $56.00

Varieties organized within sections by days to maturity.

PATTY PAN



200–320 seeds/oz. 1/8 oz packet sows 5–8 hills; 1 oz, 40–60 hills. Gourmets call patty pans "scallopini" and consider them the most appetizing of the summer squashes. Were also known as simlins or cymlings a century ago. **Culture:** Harvest as tiny buttons or up to fist size.

1577YO Y-Star OG (48 days) F-1 hybrid. A new color and new earliness for patty pan squash. Bright yellow uniform scallops with pale green stars on the blossom end. Harvested small, they are quite sweet and tender, their open plant habit with minimal spines making them extremely easy to gather. Y-Star really pumps out the fruits over an extended period. In 2010, Donna Dyrek's first ripened July 18, a full two weeks ahead of Benning's, and they kept coming right till the end. ③

A=1/16oz, $3.60 **B**=1/8oz, $7.00 **C**=1/4oz, $12.00 **D**=1oz, $37.00
E=4oz, $140.00

1580SN Sunburst (52 days) F-1 hybrid. Among the most attractive of the Patty Pans with its bright yellow skin, a staple for market growers since winning the 1985 AAS. "Last one still standing," says Anne Elder, "when all else has gone by the wayside of powdery mildew and cold temperatures." ⑥

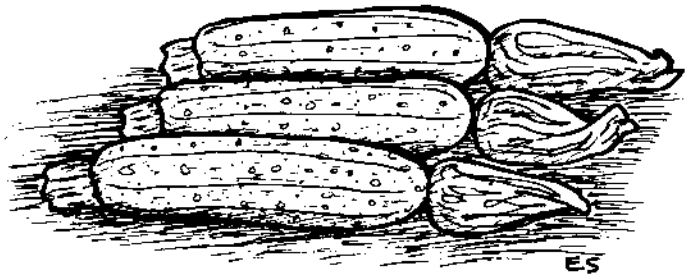
A=1/8oz, $3.10 **B**=1/4oz, $5.80 **C**=1/2oz, $10.00 **D**=1oz, $17.50
E=4oz, $65.00 **K**=1lb, $250.00

1590BG Benning's Green Tint (55 days) Open-pollinated. Also known as Farr's White Bush, developed by Charles N. Farr and introduced in 1914 by F.W. Bolgiano & Co. of Washington, DC. Farr selected for the uniform scallops and the greenish-cream coloring in the younger stages of the fruits. Rated by many as the best-tasting summer squash, especially if picked small at 2–3" diameter when they are especially fine-textured and tender. ②

A=1/8oz, $1.30 **B**=1/4oz, $2.20 **C**=1/2oz, $3.80 **D**=1oz, $6.00
E=4oz, $11.00 **K**=1lb, $32.00

LEBANESE

200–320 seeds/oz. 1/8 oz packet sows 5–8 hills; 1 oz, 40–60 hills. Also called Mid-East or Cousa squashes, Lebanese types typically have white-mottled pale green skin and a blocky bulbous shape.



1484AX Alexandria (47 days) F-1 hybrid. Summer squash in June from direct-seeding? You bet! In 2015 the first ripe fruit from Alexandria came June 27. By July 11 the three plants had already cranked out 11 and when they finally finished in mid-September they had doubled the production of the next best among eight varieties. This highly marketable Cousa was the first to produce and the last to succumb to PM. Strong plants with semi-erect single stems and an open habit for easy picking. Resists ZYMV, WMV and tolerates PM. ②

A=1/8oz, $2.80 **B**=1/4oz, $5.00 **C**=1/2oz, $9.00 **D**=1oz, $17.00
E=4oz, $60.00

1488WB White Bush (50 days) Open-pollinated. These robust crawly plants are amazing croppers; yielded 15 fruits per plant in our trial plot. Pick fruits when they are young and tender or allow them to fatten for stuffing. Marketers note: must be handled gently so not to scratch. Relentless says better than a hybrid in many ways: "Sublime taste and makes better pickled chips than cucumbers." "Firm and flavorful, not at all watery, scrumptious brushed with olive oil and grilled, then showered with minced basil and mint," advises Elaine Carlson. ②

A=1/8oz, $1.40 **B**=1/4oz, $2.20 **C**=1/2oz, $3.50 **D**=1oz, $5.00
E=4oz, $9.00 **K**=1lb, $20.00

Squash blossoms are a delicacy. Harvest male blossoms when fully open for salads or stuffing. Male blossoms typically precede females by about a week. Females have a bulge at the base of the blossom, an early stage of the fruit forming.

In early summer, a combination of cool, cloudy weather and declining bee populations may result in poor pollination causing low yields. Mites and colony collapse disorder have wiped out a high percentage of wild and domesticated honeybee colonies in the last 20 years, creating a real crisis for cucurbit growers.

Days to maturity are from date of seeding.

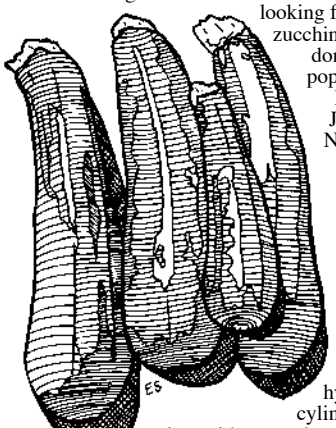
1402EB Eight Ball (40 days) F-1 hybrid. Noted squash seed grower Hollar did not have to hire Minnesota Fats as their publicity director to win an AAS for Eight Ball in 1999 and we're not hustling when we assert that Eight Ball deserved the award. Eight Ball has the sweetness and squash flavor previously missing from round zucchini. The plant's open bush habit should please both home and market growers. Its earliness might well give you your first ripe squash of the season. They'll keep coming, too, till they run your table! Yes, the attractive shiny speckled dark fruits are mature when they're just a little bigger than pool balls. One customer reports oversized Eight Balls will turn orange and make great fall decorations. ②
A=1/8oz, $3.00 **B**=1/4oz, $5.00 **C**=1/2oz, $9.00 **D**=1oz, $17.00
E=4oz, $52.00 **K**=1lb, $200.00

1404JP Jackpot (42 days) F-1 hybrid from Hollar. Produces high yields of long medium-dark green lightly speckled fruits slightly ridged near the stem. In my first trial I harvested 59 fruits from just two hills. Open plant habit features a long single-stem bush with few spines. Continuous production of firm 6 1/2" zukes, tender, mild and sweet. Take these to market and win the jackpot. ②
A=1/8oz, $2.20 **B**=1/4oz, $3.80 **C**=1/2oz, $6.50 **D**=1oz, $11.00
E=4oz, $35.00 **K**=1lb, $120.00

1406SB Spineless Beauty (46 days) F-1 hybrid. In zucchini, unlike in politics, spinelessness is a virtue; when you harvest Spineless Beauty your hands will never itch. (And your palms won't itch either, unless you go into politics!) The 7 1/2x1 1/2" medium-dark green fruits of the Ambassador type are borne on open plants with spineless petioles. A standout in Sam Birch's and Highmoor Farm's summer squash trials. ⑥
A=1/8oz, $2.30 **B**=1/4oz, $4.10 **C**=1/2oz, $7.00 **D**=1oz, $13.00
E=4oz, $42.00 **K**=1lb, $150.00

1409RV Raven (48 days) F-1 hybrid. Our best-selling zucchini for market growers. Raven sets the standard for dark zucchini. Its smooth-skinned glossy shapely greeny-black fruits make it the "prettiest of all zucchini, plant and fruit alike" to Anne Elder. Its merits go more than skin deep as research by Dr. John Navazio showed that Raven's dark pigmentation contains more of the antioxidant lutein than lighter-skinned varieties. Relatively early concentrated production so market growers can make succession plantings. Performs well even in poor squash years. ⑥
A=1/8oz, $2.30 **B**=1/4oz, $4.00
C=1/2oz, $7.00 **D**=1oz, $11.00
E=4oz, $40.00 **K**=1lb, $150.00

1411BZ Black Zucchini (50 days) Open-pollinated. A misnomer as Black Zucchini is not as dark as Raven but instead dark green. Perfect for home gardeners who are looking for an open-pollinated zucchini with superior flavor, but who don't require record-breaking yields. Also popular among some commercial growers. Brought from California in 1931 by the Jerome B. Rice Seed Co. of Cambridge, NY. Fruits of greenish-white firm tender flesh with small seed cavities are best picked around 6". The flavor was well above average in our taste tests. Open plant habit makes picking relatively easy. ②



A=1/8oz, $1.30 **B**=1/4oz, $2.10
C=1/2oz, $3.00 **D**=1oz, $5.00
E=4oz, $8.00 **K**=1lb, $18.00

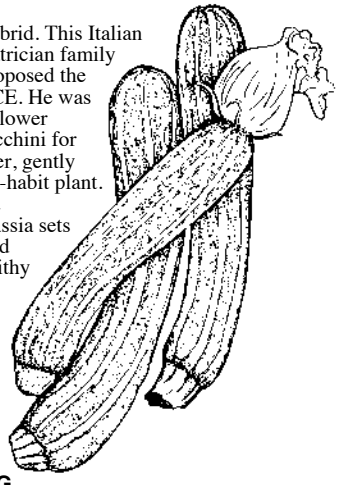
GOLDEN ZUCCHINI

1424SE Sebring (50 days) F-1 hybrid. A beautiful golden straight-sided cylindrical zucchini, relatively free of green tips, with open plant habit for easy harvesting. Averaged 17 baby fruits per plant or 6 mature fruits. Rated "very early" in the 2006 OSU trial. Showed some drought stress in early July 2012, producing misshapen fruits, but bounced back nicely. Resistant to PM. ②
A=1/8oz, $2.70 **B**=1/4oz, $5.00 **C**=1/2oz, $9.50 **D**=1oz, $16.00
E=4oz, $60.00 **K**=1lb, $200.00

Do we sell graded seed? While the open-pollinated varieties we offer are almost never graded, we do receive graded seed for some of the hybrids, particularly in sweet corn, summer squash, brassica and pepper. Contact our facilitators at (207) 426-9900 or questions@fedcoseeds.com if you need specific information about seed size for a given hybrid variety, and we will help when we can.

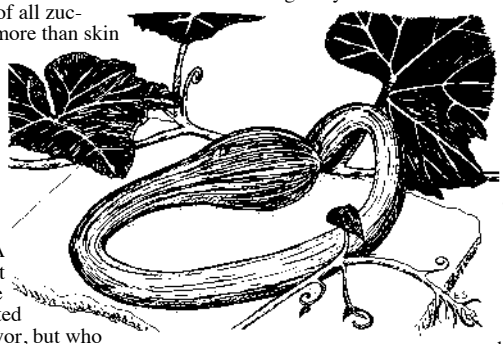
RIBBED & STRIPED

1434CZ Cocozelle (53 days) Open-pollinated. Rich-flavored zucchini ribbed with light green stripes. This Italian heirloom was called *Cocozella di Napoli* in the 1800s. The term 'zucchini' (little squash) was first published in the USA by California seed house Aggeler & Musser in 1921. ②
A=1/8oz, $1.30 **B**=1/4oz, $2.00 **C**=1/2oz, $3.50 **D**=1oz, $5.00
E=4oz, $8.00 **K**=1lb, $20.00



1450SO Cassia OG (55 days) F-1 hybrid. This Italian innovation bears the name of ancient patrician family Cassia, whose most famous member proposed the first Roman land reform laws in 486 BCE. He was promptly executed for pandering to the lower classes. Romanesco-type Cassia is a zucchini for the people, providing a bounty of slender, gently ribbed fruits on an easy-to-harvest open-habit plant. Although its flavor can't match beloved open-pollinated Costata Romanesca, Cassia sets dense nutty fruits earlier, prolifically and keeps going for weeks longer with no pithy cores. Tolerating cooler temps, Cassia stood out in the prolonged chilly Maine spring of 2017. Great for open-field culture in the north, but also recommended for early cool-season planting in high tunnels. ④
A=1/8oz, $3.70 **B**=1/4oz, $6.00
C=1/2oz, $11.00 **D**=1oz, $20.00
E=4oz, $72.00

1457CO Costata Romanesca OG (60 days) Open-pollinated. Will Bonsall calls it "the only summer squash worth bothering with, unless you're just thirsty." Deeply striped and ribbed, Costata resembles Cocozelle in appearance but with a distinctive sweet mildly nutty flavor. Also a productive source for tasty male squash blossoms and good for stuffing even when the fruits get way oversized. Tender skin damages easily, a liability for commercial transport. Slower to bear and not as high yielding as hybrid varieties. However, resisted a severe PM epidemic and still bore lovely fruits on Sept. 10 in 2016. If you want to win the blue ribbon for largest summer squash at your fair, grow Costata. It reaches 20 lb in a good year. ①



A=1/8oz, $2.50 **B**=1/4oz, $4.50
C=1/2oz, $6.50 **D**=1oz, $11.00
E=4oz, $38.00 **K**=1lb, $120.00

ZUCCHINI RAMPICANTE

1460TR Tromboncino (60 days summer squash, 90 days winter squash) Open-pollinated. Also known as zucchini rampicante although, unlike other zucchini, a *C. moschata*. Tender, mild, sweet and nutty when harvested as summer squash at 8–12". Delicious steamed, grilled or sliced raw in salad. Italians use it in gnocchi and to stuff ravioli. When the green-tan fruits grow very long, they are good baked as winter squash. As might be inferred from its alias, its vines are rampant and should be trellised. "Out-tastes 95% of the Zuke pack," declares grower/breeder Relentless. ②
A=1/8oz, $1.80 **B**=1/4oz, $3.00 **C**=1/2oz, $5.00 **D**=1oz, $9.00
E=4oz, $28.00 **K**=1lb, $87.00

BITTER MELON *Momordica charantia*

1596JD Jade Dragon (65 days) F-1 hybrid. Bright pastel-green bumps and fluting cover the curvaceous lines of this well-named 8–14" exotic beauty, looking every bit the jade dragon. Botanically, it is neither a melon nor a gourd. Don't be put off by the English name 'bitter melon'—instead, think balsam pear of Asia or karela of India, where it is a well-regarded tropical vegetable akin to immature squash that has only a bit of bitterness and absorbs other flavors really well. I have a friend who makes it a delicious centerpiece of his Solstice Feast. Now, through the wonders of modern breeding, we can enjoy a variety that has been adapted to our climate. Juniper Farm, in Quebec north of the 45th parallel, trialed 7 varieties and declared this one the best: early, productive (with about 3 fruits per plant) and oh so beautiful, "a gift to grow." Plants are commonly trellised beside porches for summer shade. Long prized for its medicinal qualities, both the leaves and fruits are used as antivirals and to reduce blood-sugar levels. The leaves can be made into tea or cooked as greens. This truly versatile plant deserves more attention. Plant in the warmest spot in your garden, and use a trellis for straight fruit. ③ **BACK!**
A=1/16oz, $6.00 **B**=1/8oz, $10.00 **C**=1/4oz, $18.00 **D**=1oz, $54.00
E=4oz, $170.00

Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

WINTER SQUASH

All open-pollinated except where noted.

Culture: Tender, will not survive frost. May be direct-seeded or transplanted. Direct seeding: Sow 4–5 seeds per hill when weather has warmed after danger of frost. Allow 4–6' between hills. Thin to 3 best plants. Use row covers and low tunnels to hasten maturity and reduce insect damage. Transplanting: Start indoors 3 weeks before setting out. Do not disturb the roots. Transplant bush varieties 18" apart, vining varieties 30" apart. Heavy nitrogen feeders. Excessive heat and/or drought can prevent blossom set, reduce yields. Winter squash can take one or two light frosts on the vine.

To combat squash bugs without using pyrethrum or neem: protect young plants with row covers. Striped cucumber beetles and squash bugs overwinter in squash residues so burn or haul these away at season's end rather than cold composting them. Squash bugs lay their brown or brick-red egg clusters on the underside of the foliage, often next to the central vein. Hand-picking bugs in June and July will mitigate an endemic problem and greatly reduce squash bug damage.

Minimum germination temperature 60˚, optimal temperature range 70–90˚.

Days to maturity are from direct seeding; subtract 20 days for transplants.

Pests & diseases: See the sidebars on pages 23 and 29.

BR Black Rot PM Powdery Mildew

Acorn squash *Cucurbita pepo*

~280 seeds/oz. Dr. Loy found that acorn squash often are not fully ripe even when they attain full size and color. They continue to develop sugars until 45 days after pollination. Do not harvest until most of the fruits display an orange ground spot. Much of their reputation for watery, fibrous, inconsistent eating quality is probably the result of premature harvesting.

1605CV Carnival (85 days) F-1 hybrid. Carnival will give your senses a thrilling ride: first treating your eyes to a kaleidoscope of colors, each fruit flecked with shades of green, gold and yellow, no two exactly alike. Then wafting to your nostrils with its nutty squash aroma as it bakes, finally thrilling your taste buds with its full-bodied sweetness. This semi-bush acorn type produces medium-sized fruits near the crowns for easy picking. Jason Kafka reported outstanding success growing Carnival and **1624** (p. 62) Sweet Mama on landscape fabric. A marvelous seller at farmers markets. Will store for many months. *Note: color variation is a function of temperature. In high temperatures Carnival will have less yellow and gold and more green.* ⑤

A=1/8oz, $3.00 **B**=1/4oz, $5.50 **C**=1/2oz, $11.00 **D**=1oz, $20.00
E=4oz, $60.00 **K**=1lb, $230.00

1606SO Sweet REBA OG (90 days) REBA stands for Resistant Early Bush Acorn. Even if you are acorn-averse, try REBA because this Cornell release is one of the sweetest acorns, flesh dry and substantial. Despite compact bush habit, heavy yields of 1–1 1/2 lb fruit. Janine Welsby harvested 25 squash from four plants. They sold so fast that she didn't get to try one "but everyone said they were delicious." Resists PM, helping sugars develop. ③

A=1/8oz, $2.50 **B**=1/4oz, $4.50 **C**=1/2oz, $8.00 **D**=1oz, $15.00
E=4oz, $56.00

1608TQ Table Queen (90 days) Black-green ribbed 1 1/2–2 lb fruits good for baking. Dry flesh is best eaten within 3–4 months after harvest. Introduced by the Iowa Seed Co. in 1913 and once known as Des Moines, Queen began a trend away from monster squashes in favor of smaller fruits. A similar squash was grown by the Arikara tribe in North Dakota. ③

A=1/4oz, $1.50 **B**=1/2oz, $2.30 **C**=1oz, $3.80 **D**=4oz, $9.00
E=1lb, $25.00

1609PD Paydon (105 days) This extremely rare large tan acorn migrated from France to Louisiana to Ohio to Bosco, IL, where it was maintained by the Paydon family since the 1860s. Flavor, texture and sweetness remind us of Delicata and Sweet Dumpling. Delicious yellow flesh, though a bit stringy. Teardrop-shaped fruits turn from creamy-tan to bright yellow in storage. Extremely vigorous vines give moderate yields of 3 lb fruits. *Requires too long a season for cold northerly areas.* ①

A=1/8oz, $2.30 **B**=1/4oz, $4.00 **C**=1/2oz, $7.00 **D**=1oz, $12.00
E=4oz, $40.00

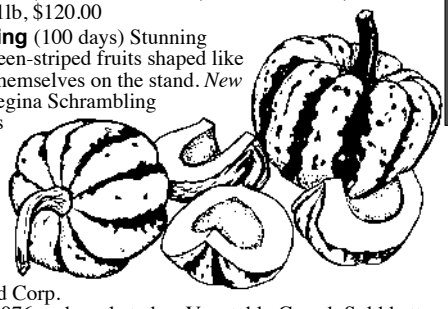
Delicata & Dumpling *C. pepo*

~450 seeds/oz. 1/8 oz packet sows 4 hills.

1611ZO Zeppelin Delicata OG (100 days) Zeppelin is a good Delicata. Frank Morton selected it for stocky plants from an old strain, and he continues to maintain the seed. The lovely ivory-colored oblong 1 lb fruits with dark green stripes have the unsurpassed sweetness that gives Delicata its good reputation. In storage the green stripes turn orange and the cream background sometimes yellows. No need to peel—cooked skins are tender and nutty. Ω ①

A=1/8oz, $2.40 **B**=1/4oz, $4.30 **C**=1/2oz, $7.00 **D**=1oz, $13.00
E=4oz, $32.00 **K**=1lb, $120.00

1614SD Sweet Dumpling (100 days) Stunning 1–1 1/2 lb ivory-colored green-striped fruits shaped like miniature pumpkins sell themselves on the stand. *New York Times* food writer Regina Schrambling called them the "avocados of squash" for their inherent buttery richness and sweet-tangy taste. To experience its sweet dry and memorably rich deep orange flesh, make sure your Dumpling is ripe. Introduced by Sakata Seed Corp. of Yokohama, Japan, in 1976 and marketed as Vegetable Gourd. Sold better after they changed its name to the more appealing Sweet Dumpling. ②

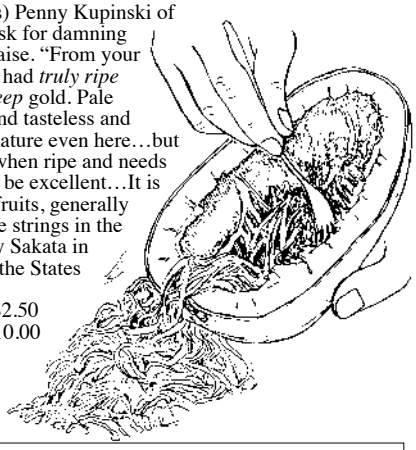


A=1/8oz, $1.70 **B**=1/4oz, $3.00 **C**=1/2oz, $5.00 **D**=1oz, $8.00
E=4oz, $20.00 **K**=1lb, $60.00

Spaghetti squash *C. pepo*

~190 seeds/oz. 1/8 oz packet sows 5 hills.

1616SP Spaghetti (88 days) Penny Kupinski of Harrisburg, MO, took us to task for damning spaghetti squash with faint praise. "From your description you may not have had *truly ripe* spaghetti squash which is a *deep* gold. Pale yellow is nowhere near ripe and tasteless and tough. Takes a long time to mature even here…but has a wonderful nutty flavor when ripe and needs only a little salt and pepper to be excellent…It is also a great keeper." Oblong fruits, generally around 4 lb with spaghetti-like strings in the flesh. First commercialized by Sakata in Japan in 1934 and brought to the States by Burpee two years later. ②



A=1/4oz, $1.90 **B**=1/2oz, $2.50
C=1oz, $4.50 **D**=4oz, $10.00
E=1lb, $35.00

Squash Pest: Striped Cucumber Beetle
Cultural controls: use tolerant or resistant varieties, use transplants instead of direct seeding, rotate crops, till under crop debris soon after harvest, use floating row covers (**8874**) until flowers appear, use plastic mulch (**8418**), perimeter trap cropping (**1411** Black Zucchini and **1655** Blue Hubbard make particularly good trap crops), hand-pick early morning when beetles are very sluggish.
Materials: Surround (**8720**), AzaMax (**8735**), Pyrethrum: ((**8765**) PyGanic, (**8768**) Bug Buster-O, (**8660**) Neem oil.)

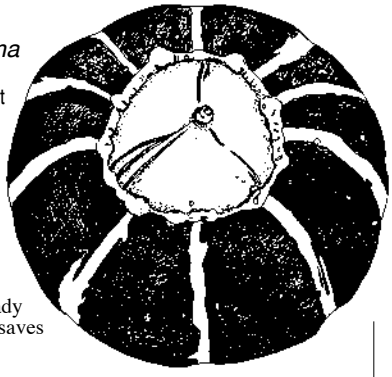
Pest: Squash Bug
Cultural controls: rotation, till in cucurbit debris before winter and plant a cover crop, boards on soil surface near squash will attract bugs overnight which can be killed, destroy egg clusters on undersides of leaves, avoid mulching.
Materials: Pyrethrum (**8765-8**) on young nymphs, neem (see **8660** Neem Oil and **8735** AzaMax).

Pest: Squash Vine Borer
Cultural controls: butternut squash is resistant, *maximas* & *pepos* susceptible; rotation, plow in squash vine debris soon after harvest, use floating row covers (**8874**), watch for wilting plant parts and destroy borer within.
Materials: Monitor for adult moths and apply spinosad (**8762**) *during moth flight and up to one week later.* Later applications are ineffective.

Disease: Powdery Mildew
Cultural Controls: Use small plots to slow spread, plant indeterminate (viney) varieties, control weed competition.
Materials: sulfur (**8684-8690**) and whole milk; mineral or other oils (**8711** Stylet Oil) in combination with potassium bicarbonate (**8666** MilStop); **8665** Monterey Bi-Carb; **8693** Regalia; **8702** Actinovate; **8705** Serenade. Copper spray (**8672**) as a last resort.

Disease: Bacterial Wilt
Cultural control: Striped Cucumber Beetle is vector—control it; choose resistant varieties.

Buttercups *Cucurbita maxima*



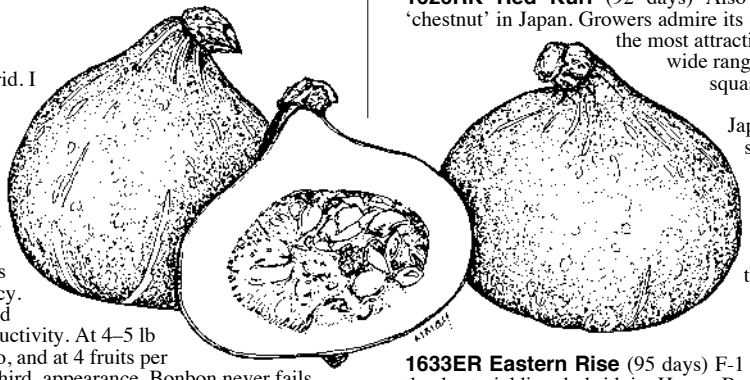
~160 seeds/oz. Buttercup squashes, the main type grown in the Northeast, account for about 19% of New England winter squash sales. Fat round stems turn corky and woody when the squash is ripe; green in the stem signifies immature fruit.

1622BU Bush Buttercup Emerald strain (80 days) Fruits generally a lighter green than Burgess Buttercup, not as uniform or good quality but ready two weeks earlier. Mostly bush habit saves space. Introduced 1952. ②

A=1/4oz, $2.40 **B**=1/2oz, $4.00
C=1oz, $7.00 **D**=4oz, $24.00

1628BB Burgess Buttercup (95 days) New England's favorite winter squash, enjoyed for its sweet deep-orange flesh. Fruits, with an acorn-shaped button on the blossom end and flattened shoulders, average 3–4 lb with about 4 per hill. Stem is well dried when ripe. The original buttercup strain showed up in 1925 as a chance cross between Quality and Essex Hybrid in the trial garden at North Dakota Agricultural Experiment Station. After further selection by famous seedsman Albert Yaeger, Oscar H. Will of Bismarck introduced it in his 1931 catalog. Alan Kapuler has said, "If you pick only one squash to grow this is it." Jean Kennedy of Little Red Barn Produce in Walton, OR, agrees: "This squash is not getting the attention others are and it is waaay better! Its texture is perfectly smooth, it has just the perfect sweetness and its flavor isn't overly squashy. Could be used in any recipe for dessert or dinner." ②

A=1/4oz, $1.70 **B**=1/2oz, $2.80
C=1oz, $5.20 **D**=4oz, $13.00
E=1lb, $42.00 **K**=5lb, $200.00

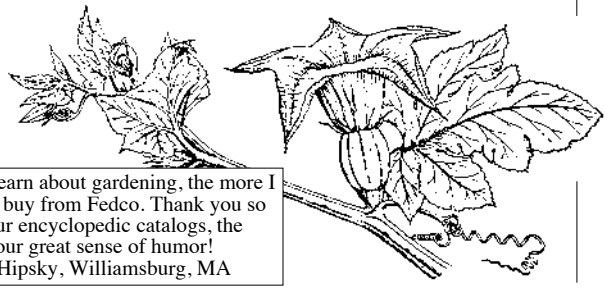


1629NN Bonbon (95 days) F-1 hybrid. I am reluctant to add hybrids where we have perfectly good open-pollinated varieties in the catalog. However, a dozen years after Johnny's won an AAS award for Bonbon, it is time for us to strengthen our buttercup selection and give this superior variety its due. Bonbon's advantages over the old Burgess strain are slight, but across the board they add up. First, consistency. Burgess can be variable, and in stressed seasons that may matter. Second, productivity. At 4–5 lb Bonbon is slightly the larger of the two, and at 4 fruits per plant, may yield more fruits as well. Third, appearance. Bonbon never fails to have the prominent grey button at its base that is the hallmark of the true buttercup. Fourth, flavor. Each at its best has superb flavor, but Bonbon is more likely to deliver it. Under highly fertile and favorable conditions, as when my rampant vines crawled through a manure pile during the very warm 2015 season, production can be astonishing. Although the seed is expensive, if your markets and profitability demand consistency, Bonbon may offer you value despite the cost. ③

A=1/4oz, $4.30 **B**=1/2oz, $8.00 **C**=1oz, $15.00 **D**=4oz, $44.00

1630DO Uncle David's Dakota Dessert OG (95 days) David Podoll calls this strain "the original buttercup." It has been in his family for 70 years. They've been selecting it for 40 years, crossing it with hubbards and other *maximas*, primarily for color, taste, sweetness, and vigor and hardiness in cold weather, but also for thick flesh, small seed cavities and higher productivity. The Podoll family bake it into pies without using any other sweetener. Also a versatile main-dish squash, with all the character that makes buttercup a New England favorite. Ω ①

A=1/4oz, $2.60 **B**=1/2oz, $4.50 **C**=1oz, $8.00
D=4oz, $28.00 **E**=1lb, $105.00



The more I learn about gardening, the more I only want to buy from Fedco. Thank you so much for your encyclopedic catalogs, the OSSI, and your great sense of humor!
– Kirsten Hipsky, Williamsburg, MA

To improve flavor and storage, field cure for at least 10 days after harvest, covering if hard frost threatens. Store under proper conditions, at least 50˚ and 60–70% relative humidity in a place with good air circulation. Do not pile up squash. Inspect periodically and be sure to use damaged, stemless or small fruit first. Acorns have the shortest storage time before getting stringy, followed by delicatas.

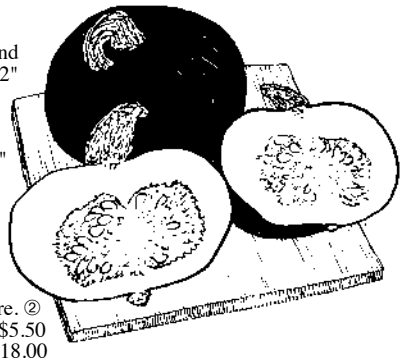
Kabocha group *C. maxima*

~160 seeds/oz. 1/8 oz packet sows 4 hills. Kabocha is a Japanese "pumpkin." Kabochas look like buttercups without the protruding cup on the blossom end.

1624SM Sweet Mama (88 days) F-1 hybrid. Mama is a grey-green drum-shaped kabocha type with rounded shoulders and no cup. A week earlier than Burgess with outstanding sweet flavor. Among CR's favorite large winter squash, dependable Mama pleases commercial growers as well as home gardeners. 1979 AAS. ⑤

A=1/8oz, $4.00 **B**=1/4oz, $7.00 **C**=1/2oz, $12.00 **D**=1oz, $21.00
E=4oz, $80.00

1625TH Thunder (88 days) F-1 hybrid. Our taste testers greeted this kabocha/buttercup hybrid with *thunder*ous applause. They found the taste of its dry sweet dense 2" thick flesh en*lightening*. Gardeners will also like its productivity of 3–4 uniform 3 1/2 lb fruits per plant. The 7x4" squash with no cup has jade sutures with jade splotches over forest green skin. Very early maturing for its type and, with long corky stems, easy to cut from the vine. Add a little boom to your winter storage fare. ②



A=1/8oz, $3.00 **B**=1/4oz, $5.50
C=1/2oz, $10.00 **D**=1oz, $18.00
E=4oz, $64.00

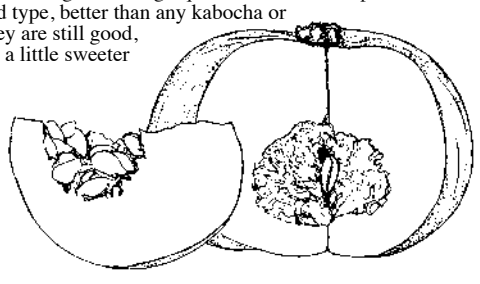
1626RK Red Kuri (92 days) Also called Uchiki Kuri; *Kuri* means 'chestnut' in Japan. Growers admire its spectacular red-orange fruits, among the most attractive of all squashes. Its flavor elicits a wide range of comments from "the best winter squash" to "glorified zucchini, flavor like water." Liking the dry flesh of this Japanese squash, we think the truth lies somewhere in between. Very popular at roadside stands. Teardrop-shaped fruits avg 3–4 lb. Though reputed to be good keepers, their thin skins do not store well, say members of one CSA. Also prized for the aroma of their blossoms when fried. ⑤

A=1/8oz, $2.60 **B**=1/4oz, $4.80
C=1/2oz, $9.00 **D**=1oz, $16.00
E=4oz, $44.00 **K**=1lb, $160.00

1633ER Eastern Rise (95 days) F-1 hybrid. The #1 squash in China and the best-yielding hybrid in Heron Breen's trial, besting **1635** Sunshine. Featuring a creamy texture with just the right sweetness, Rise's heavenly flavor won unanimous praise from our feisty warehouse tasting crew. Heron reports it cures more reliably than Sunshine, even in poor fall weather, coming into full flavor after December with almost no spoilage until after February. Carol Deppe, of Fertile Valley Seeds in Corvallis, OR, concurs. Average 3 1/2 lb fruits, attractive orange-red streaked with green, flattened large buttercups without the turban. Firm orange flesh with rich nutty flavor in perfect balance, the right sweetness, the right moistness, the right texture, smooth and hearty. Grows well in cool conditions; dislikes extreme heat. When grown in inadequate sunlight may develop green spots. PM tolerant. ③

A=1/8oz, $3.30 **B**=1/4oz, $6.00 **C**=1/2oz, $11.00 **D**=1oz, $20.00
E=4oz, $76.00 **K**=1lb, $260.00

1635SS Sunshine (95 days) F-1 hybrid. Sunshine, Johnny's AAS winner, combines the spectacular scarlet color of a Red Kuri with a sublime eating quality previously lacking in red squash. The bright orange flesh, dry yet tender, sweet yet meaty, has tested as high as Brix 15. While none of the Buttercup types is high yielding, these short-vined plants give a fair harvest of fruits shaped like a buttercup but with rounded shoulders and no turban. One year we had 14 averaging 4.4 lb each from just three hills. Rob Johnston says they derived Sunshine from a cross between two different orange varieties developed at Johnny's. Heron says its thin skins do not cure well in cold wet autumns and can be damaged around stems and shoulders by light frosts. Kristen Davenport of Boxcar Farm in Washington disagrees about the relative storage capabilities of Sunshine and Eastern Rise. She says, "Sunshine was our longest storing squash with the exception of our local Maxima Hubbard type, better than any kabocha or acorn…as of Jan. 4 they are still good, hard, flesh perfect and a little sweeter than in the fall." ③



A=1/8oz, $3.50
B=1/4oz, $6.50
C=1/2oz, $12.00
D=1oz, $21.00
E=4oz, $60.00
K=1lb, $225.00

Hubbard squash *C. maxima*

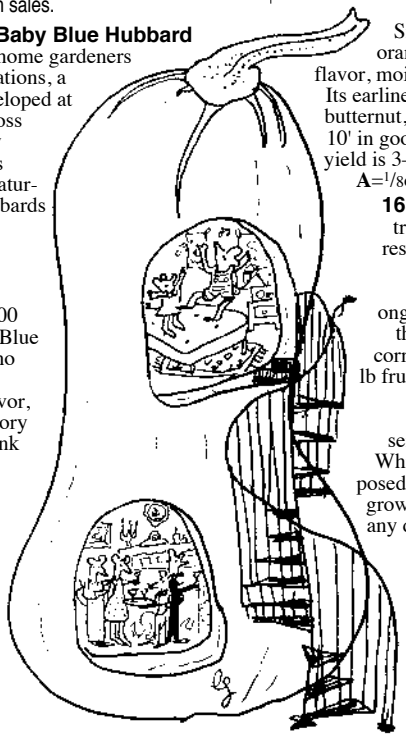
~120 seeds/oz. 1/8 oz packet sows 3 hills. Gregory, who introduced hubbards to commerce around 1850, called them "the acme of perfection in squashdom," though they now account for only about 5% of New England winter squash sales.

1654BB Baby Blue Hubbard (95 days) For home gardeners with space limitations, a scaled-down version of **1655** Blue Hubbard developed at the University of New Hampshire from a 1953 cross between Blue Hubbard and Bush Buttercup. Baby Blue's vines are much more compact and its fruits much smaller (about 4–5 lb), but their flavor at maturity doesn't match up to those traditional large hubbards and their yield is lower, too. ②

A=1/8oz, $1.90 **B**=1/4oz, $3.00
C=1/2oz, $5.00 **D**=1oz, $8.00
E=4oz, $18.00 **K**=1lb, $60.00

1655BH Blue Hubbard New England strain (100 days) Introduced in 1909 by Gregory as Symmes Blue Hubbard, in honor of S.S. Symmes, a gardener who worked for his company for many years. Gregory considered it his best introduction, praising its flavor, productivity and storage qualities. The 1917 Gregory catalog said "close your eyes…and you would think you were eating cake." Bright yellow-orange dry sweet flesh. Each squash will feed a large family because fruits average 15–20 lb, sometimes exceeding 30 or 40 lb. Vines crawl all over the garden. Traditional New England Thanksgiving favorite. Prized also for its large white sweet seeds—delicious roasted. Blue Hubbard has proven effective as a perimeter trap crop for striped cucumber beetles. Completely encircle a main crop of other cucurbits with Hubbard vines, concentrating the pests in the border areas. ②

A=1/4oz, $1.70 **B**=1/2oz, $2.80
C=1oz, $4.50 **D**=4oz, $12.00
E=1lb, $32.00



Supplier Codes Know where your seed comes from! Details on page 5.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Manufacturers of neonicotinoids: Syngenta.

Butternut squash *Cucurbita moschata*

~400 seeds/oz. Butternut was introduced in 1936 by Joseph Breck and Sons of Boston, out of Canada Crookneck, an 1800s variety. The best keepers and the squash of choice in Zones 6 and south because of their relative resistance to the squash vine borers that torment other species. See also Cheese Pumpkin, p. 54.
Culture: Butternuts should be started indoors to mature in our climate.

1683BO Burpee's Butterbush OG (87 days) "Hands down the best" of the nine different butternuts Mark Fulford tried over the years. Smooth tan 2–3 lb fruits with small seed cavities and deep reddish-orange flesh are "as sweet as the best sweet potatoes." Superior nutty flavor, moist but never watery—though not as moist as the larger butternuts. Its earliness is boon in cold summers. Though named and classed as a bush butternut, more accurately they have determinate vines that can crawl up to 10' in good fertility. Still a big advantage where space is precious. Average yield is 3–5 ripe fruits per plant. Excellent keeper. ①

A=1/8oz, $2.50 **B**=1/4oz, $4.20 **C**=1/2oz, $7.50 **D**=1oz, $13.00

1686LD Little Dipper (104 days) F-1 hybrid. In summer 2015, we trialed a slew of those personal-size, supposedly powdery-mildew–resistant, hybrid butternuts. We were shocked to find that all but one variety melted down and yielded poorly. While we pawed around salvaging the few fruits of this and that failure, Little Dipper's ongoing eruption of green stood in sharp contrast. The small fruits of the other personal butternuts come with restricted habit and often a correspondingly low yield. Dipper's plethora of uniform pale-tan 2–3 lb fruits are set on fully running weed-suppressing vines. We harvested an impressive 22 fruits from 3 plants. Open-pollinated Burpee's Butterbush stills reigns for flavor, but Dipper offers nice smooth semi-dry texture and medium nutty sweetness through long storage. While supplier stats of other varieties in the trial advertised their supposed-PMR status boldly, Little Dipper's just warned of us of the crazy growth. For disease and worry resistance, we'll take vigor and volume any day. ⑤

A=1/16oz, $3.20 **B**=1/8oz, $6.00 **C**=1/4oz, $10.00
D=1oz, $32.00 **E**=4oz, $110.00

Waltham (105 days) Elegant 9" tan fruits weighing 4–5 lb. Orange dry flesh has a sweet nutty flavor. Excellent keeper. Bred by the Massachusetts Agricultural Extension Service by crossing New Hampshire Butternut (a 1956 Yaeger/Meader development) with a neckless *moschata* from Turkey, and introduced by Bob Young of Waltham, MA. Won 1970 AAS. Continues to be Anne Elder's most dependable winter squash. *Caution: in cool summers fails to ripen in northernmost areas*. Nevertheless, our best-selling winter squash variety.

1687WB Waltham ②

A=1/4oz, $1.70 **B**=1/2oz, $2.60 **C**=1oz, $4.50 **D**=4oz, $11.00
E=1lb, $28.00

1688WO Waltham OG ③

A=1/4oz, $2.00 **B**=1/2oz, $3.50 **C**=1oz, $6.00 **D**=4oz, $13.00
E=1lb, $39.00

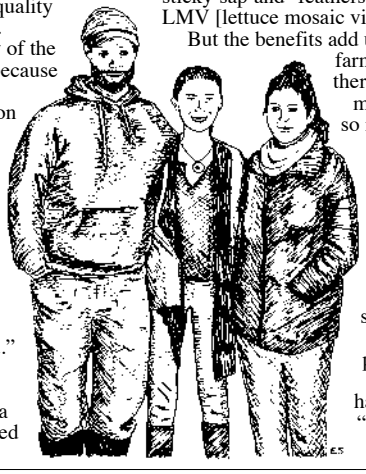
Gleanings from our Seed Growers (part 6)

Ben Yohai, of Wandering Fields Farm in Oregon, was a bit footloose in his early life, growing up between Israel and New York, followed by a short stint in Australia before college in Montreal, after which he moved to New Mexico. It was there that he met the people who would change his course. He got a job on a farm, a farm where they grew seed. At that time he resolutely stated that he would not farm on his own and he would not have a child. But within two years he had met his wife, the daughter of a Nebraska wheat farmer, and they had a baby. So he had to eat his words.

Luckily, words were not all he had to eat. Growing up in Israel, food had made its imprint, since in Southern Israel there is an outstanding produce scene and it's all really fresh since produce doesn't have to travel any great distance to market. So when Ben discovered this same kind of quality could come from "eating off the field," he was sold on farming.

But a bit of re-evaluation was in order. Despite the proximity of the Seeds of Change farm, New Mexico was not the best location because of the scarcity of water. And there was the schooling of their daughter to consider. So they made the move to Oregon and soon fell in with the Seedheads there. His first job was with Don Tipping; he met Frank Morton (see page 33) and John Navazio at an Organic Seed Alliance field day; and soon he was farming on this own, leasing land from Jonathan Spero (see page 18). And he joined up with Siskiyou Sustainable Cooperative, a group of farmers who had joined forces to form a cooperative CSA.

Right now Ben and his family farm six acres, three acres in seed, which make half the farm's income. They feel that they would not have opted to expand as much as they have solely marketing fresh produce. "That market is pretty much saturated." And with the huge industrial farms in California so close, wholesale was highly competitive. "It's a fantastic region for seeds," Ben said, and within the network of Siskiyou, they had a resource base of information and seed-cleaning equipment. "Seed allowed us to get off the farmer's market hamster wheel."



Seed, which can be marketed nationally, doesn't seem to create as much local friction between farmers. Moreover seed fills a niche on the farm since the seed they grow is the seed they sow. Ben mentioned a specific celeriac crop into which they had put a lot of work, only to have it fail its germination test; now they use that seed, a pinch at a time into a cell flat so something will germ, and then they weed out the excess.

That's one of the challenges of seed. "A crop is in the ground longer so there's a higher predation rate, higher pestilence, a higher chance of getting zilch for a block of ground. And there's the challenge of cleaning every single lot of seed since each one is different." And some crops are challenging: "I love eating lettuce but don't want to harvest it, which is partially a byproduct of when it's harvested. It's hot outside, and you've got sticky sap and 'feathers' that create an inhalation challenge. And then there's LMV [lettuce mosaic virus]."

But the benefits add up. "It's farming at a slower pace. You can stay on the farm, with the crops, with the family, and be outside. And there's not a lot of mechanized equipment needed. You're moving less biomass around and don't need to be doing so much tilling throughout the season." And beyond that, "the inherent beauty of watching the plants complete their life cycle is a very rewarding experience."

His advice is to "start small, start with what you enjoy growing and add things as your capacity increases. Be conservative initially. Then it's good to push yourself. Take on as much diversity as you can handle well. And reach out to other farmers who are seed producers; those conversations can lead to huge savings of time and energy. There's a need for more of us; it's a complete antidote to corporate seed—it's a progressive act to be taking."

But his final word, thinking of Europe where they have whole harvest festivals dedicated to a single plant: "We have a long way to go."

SPECIALTY & HEIRLOOM SQUASH

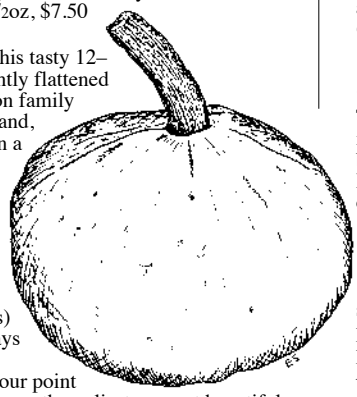
~120 seeds/oz.

1665LO Lower Salmon River OG (94 days) *C. maxima* This rare western treasure, an unsung hero among winter squashes, is among the best for eating quality. Once maintained by the old Abundant Life Seed Foundation before their unfortunate fire. In our 2009-10 winter squash taste test it won plaudits from our staff for its thick tasty sweet orange flesh, superb for squash pie. Large salmon-pink pumpkin-like fruits, quite variable in size, averaged 7.5 lb in our trial. ①

A=1/8oz, $2.50 **B**=1/4oz, $4.50 **C**=1/2oz, $8.00 **D**=1oz, $14.00 **E**=4oz, $32.00

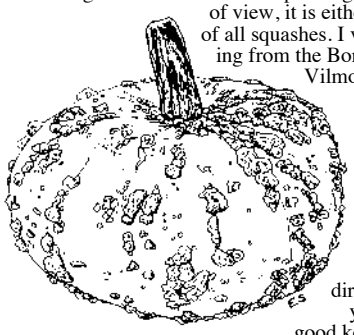
1617GB Guatemalan Blue (95 days) *C. max*. Boasts an oh-so-smooth texture and a stick-to-the-ribs heartiness that warms and satisfies on a chilly autumnal night. Heirloom Banana type from Guatemala sets 5x15" banana-shaped bluish-green fruits with slight striping. My two, one at each end of its 5–10 lb spectrum, grown in the heat of 2012, were ripe in mid-late August. Good keeper with thick firm moist yellow not overly sweet flesh. ②

A=1/8oz, $2.40 **B**=1/4oz, $4.40 **C**=1/2oz, $7.50 **D**=1oz, $12.00 **E**=4oz, $32.00



1668SM Sweet Meat (95 days) *C. max*. This tasty 12–15 lb slate-grey heirloom, shaped like a slightly flattened round pumpkin was maintained by an Oregon family for 100 years and sold by Gill Bros. of Portland, OR. A best-seller in Oregon, it has long been a western specialty variety that deserves a wider following. Its dry sweet nutty thick orange flesh improves in storage with a flavor similar to **1655** Blue Hubbard. ②

A=1/4oz, $1.70 **B**=1/2oz, $2.80 **C**=1oz, $4.50 **D**=4oz, $12.00 **E**=1lb, $32.00



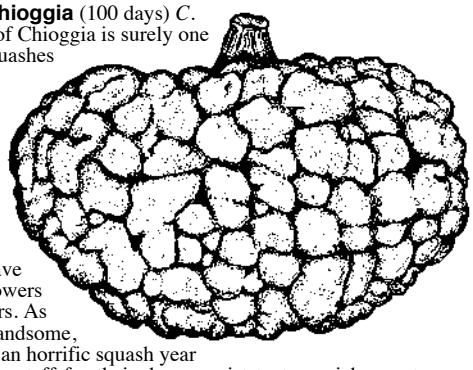
1672GO Galeux d'Eysines OG (98 days) *C. max*. Garden writer Barbara Damrosch says "it looks as if peanut-shaped worms were crawling about its surface." Depending on your point of view, it is either among the ugliest or most beautiful of all squashes. I vote for the latter. This heirloom, hailing from the Bordeaux region of France, was listed by Vilmorin in 1883 as Warted Sugar Marrow. It resurfaced at the Pumpkin Fair in Tranzault, France, in 1996. Shaped like rounded slightly flattened pumpkins, the 15 lb fruits have salmon-peach skins covered with large warts. Although Galeux is worth growing for beauty alone, its tender moist sweet orange flesh is delightful in soups or baked. Ripens easily from direct seeding even in sub- prime squash years. For your autumn pleasure; not a good keeper. ①

A=1/16oz, $2.20 **B**=1/8oz, $4.00 **C**=1/4oz, $7.00 **D**=1/2oz, $12.00

1618SB Sibley (100 days) *C. max*. Also known as **Pike's Peak**. Among the very best for flavor, this once-revered brown-seeded heirloom first surfaced in the Missouri River watershed in the 1830s and is similar to kindred varieties found among the Winnebago Indians. Some of our seed is from Hiram Sibley, whose great-great-great-grandfather of the same name introduced it to commerce in 1887 through his seed company in Rochester, NY. Present-day Hiram has been growing it in Maine in recent years, selecting for trueness to type, taste and adaptability. Vigorous 12–15' vines produce slate-blue obpyriform 1' long fruit weighing 6–8 lb, once described by Michael Pollan as "pinched in both ends and bulging at the waist." Liberty, ME, gardener Jake Kennedy adds that these fetching fruits resemble baby seals hauled out on a ledge. Famous New England seedsman James J.H. Gregory called it "magnificent" and Goldman rates it "the best of the bananas," a group she calls "top tier." Ours was rich, moist, flavorful and sweet, though we sampled it in October, too soon. The quintessential storage squash, not coming into its own until January after its orange flesh has dried and sweetened. Brought on board the Slow Food Ark of Taste. ①②③

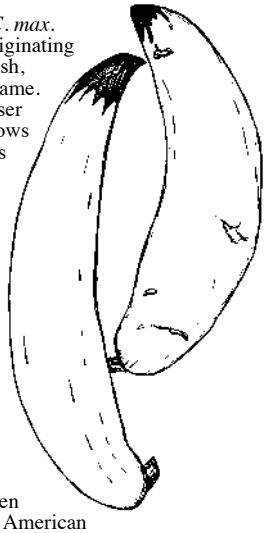
A=1/8oz, $2.40 **B**=1/4oz, $4.40 **C**=1/2oz, $8.00 **D**=1oz, $13.00 **E**=4oz, $35.00

1673MC Marina di Chioggia (100 days) *C. max*. The sea pumpkin of Chioggia is surely one of the most beautiful squashes with its deep ridges and bumpy protuberances. Variability adds to their appeal, color ranging from aquamarine to very dark green, most with bumps, some without. Though fruits grow quite large, averaging 15 lb, they have such eye appeal that growers report they are hot sellers. As delectable as they are handsome, even those harvested in an horrific squash year won accolades from our staff for their dense moist texture, rich sweetness and real substance. Delicious baked, in pies; ideal for gnocchi and ravioli. *Caution: rampant vines*. ②



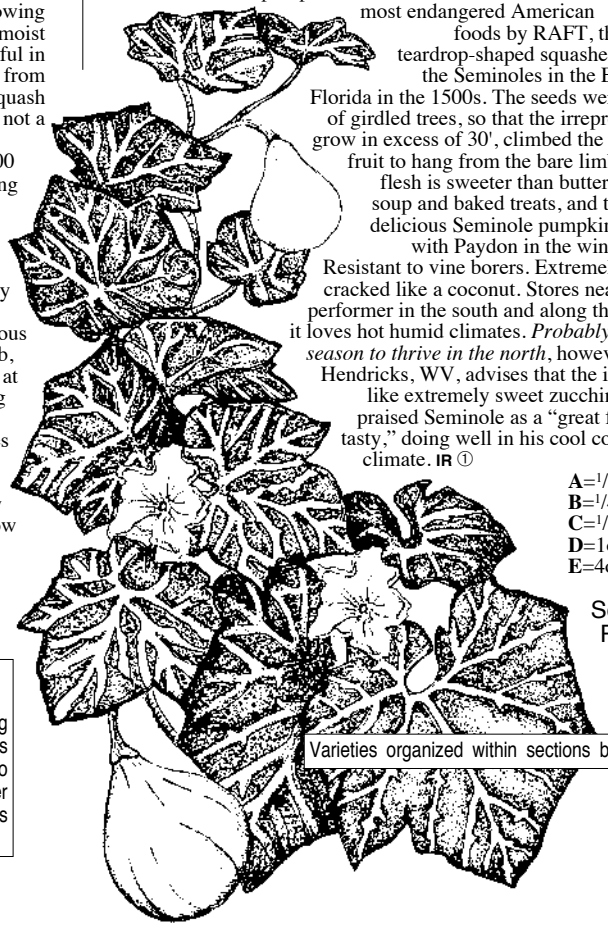
A=1/8oz, $2.40 **B**=1/4oz, $4.00 **C**=1/2oz, $7.00 **D**=1oz, $10.00 **E**=4oz, $26.00

1676CO Candy Roaster OG (112 days) *C. max*. This large Appalachian heirloom, possibly originating in North Carolina, is peerless as a baked squash, boasting superb eating quality worthy of its name. Highly esteemed by market grower Paul Hauser of Lincoln University, PA, Candy Roaster grows luxuriant vines with large leaves, and matures somewhat warty pinkish-orange enlarged buttercup-shaped fruits of variable size with blue-green markings. Warmth brings out its sweetness and it does not reach full flavor potential in cool summers. Average 2 fruits per plant ranging from 5–25 lb. *Caution: Ripens in northern areas only in good growing years*. Not to be confused with North Georgia Candy Roaster. ①②



A=1/8oz, $2.50 **B**=1/4oz, $4.50 **C**=1/2oz, $8.00 **D**=1oz, $13.00 **E**=4oz, $40.00

1693SO Seminole OG (110 days) *C. mos*. Creek-speaking Seminole Indians gave it the name *chassa-howitska*, meaning 'hanging pumpkin.' Rated one of the ten most endangered American foods by RAFT, these buff-colored 7" teardrop-shaped squashes were cultivated by the Seminoles in the Everglades region of Florida in the 1500s. The seeds were sowed at the base of girdled trees, so that the irrepressible vines, which grow in excess of 30', climbed the trunks, allowing the fruit to hang from the bare limbs. The deep orange flesh is sweeter than butternut, superb for pies, soup and baked treats, and the key ingredient in delicious Seminole pumpkin bread. Was co-star with Paydon in the winter warehouse feast. Resistant to vine borers. Extremely hard rind must be cracked like a coconut. Stores nearly forever. A great performer in the south and along the Atlantic seaboard, it loves hot humid climates. *Probably requires too long a season to thrive in the north*, however Elisa Carbone of Hendricks, WV, advises that the immature fruits taste like extremely sweet zucchini, and Keith Barton praised Seminole as a "great find, impressive and tasty," doing well in his cool coastal Berkeley, CA, climate. IR ①



A=1/8oz, $2.50 **B**=1/4oz, $4.20 **C**=1/2oz, $7.00 **D**=1oz, $13.00 **E**=4oz, $42.00

See also Culinary Pumpkins, pg 54

Saving squash seed is challenging.

We list three different species of the genus *Cucurbita*.

Different varieties within the same species will cross readily, but crossing does not occur between the different species. Seeds from a crop that has been exposed to other cucurbits of the same species won't grow true to type. If you are saving seed, you need to isolate your crop from other cucurbits of the same species by at least 1500', or protect it from insects that would bring unwanted pollen, and hand-pollinate it yourself.

Varieties organized within sections by days to maturity.

TOMATILLO & HUSK CHERRY

TOMATILLO *Physalis ixocarpa*

~500 seeds/g.

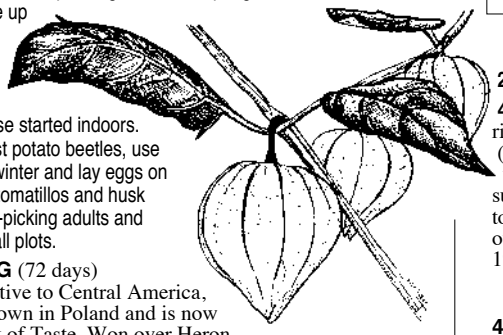
Culture: Start indoors 2 weeks after tomatoes lest they get leggy. If seedlings do get leggy, transplant them deep so the stems can root. Some like them pruned, others let them sprawl. Space plants 3' apart for the sprawlers, closer if you plan to prune. Ideal germination temperature 75–85˚. **Days to maturity are from date of transplanting, not seeding.**

4012BO Purple Blush OG (68 days) Open-pollinated. Mislabeled as 'Purple Lush' in our trials, a moniker that stuck the more we observed its lush production of large 2"+ fruits on sprawling 5' plants. Everyone who tasted them used words like 'sweet,' 'fruity,' 'yummy,' which explains why we switched from Verde Puebla. Roast them with pumpkin seeds and hot pepper, then grind together with spices for a delicious and nutritionally dense repast. The fruits blush purple where they are kissed by the sun. ①
A=0.2g, $1.80 **B**=0.4g, $3.00 **C**=1g, $4.50 **D**=2g, $7.50
E=10g, $28.00

HUSK or GROUND CHERRY *P. pruinosa*

~900-1400 seeds/g. A treat inside every paper wrapper! Same genus as tomatillo and Chinese Lantern, fruits ripen inside their protective husks. As clusters of berries sweeten, they turn from green to golden yellow, drop off the decorative branching plants, and reach perfection as their husks thin to a near-gossamer papery texture. The sweet berries have an indescribable flavor, great for raw snacks. *Don't eat them unripe—they can be a powerful emetic.*

Culture: Need filtered light and temperatures at least 75˚, preferably closer to 90˚, to germinate. Cover seeds with just a light sprinkling of soil and place the flats in the hottest part of the greenhouse, transplanting after last spring frost. Husk cherries tolerate a touch of frost but give up when temperatures dip below 30˚. In a good year, about half will ripen in time. Will readily self sow, although volunteers never mature as quickly as those started indoors.



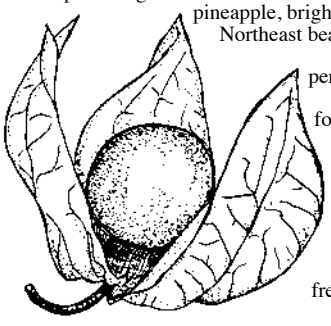
Pests: To protect plants against potato beetles, use floating row cover. Adults overwinter and lay eggs on solanaceous crops, especially tomatillos and husk cherries. If beetles get in, hand-picking adults and squishing eggs can help in small plots.

4005MO Aunt Molly's OG (72 days) Open-pollinated. Though native to Central America, this heirloom was widely grown in Poland and is now on board the Slow Food Ark of Taste. Won over Heron who had previously been indifferent to husk cherries. "Sweet and zesty." Some folks compare the flavor of these 1/2–3/4" fruits to pineapple, some to tangerines. ②
A=0.2g, $1.80 **B**=0.4g, $2.50 **C**=1g, $3.00 **D**=2g, $5.00
E=10g, $18.00

CAPE GOOSEBERRY *P. peruviana*

Similar to Husk Cherry, but larger, more upright plant with larger husks and fruits.

4009AC Ambrosia ECO (115 days) Open-pollinated. The grower calls this his heart-plant and we can see why, if only because we fell instantly in love from first bite, with taste notes ranging from an exuberant YES! to full on rhapsodizing about the extraordinary flavor (hints of coconut milk and pineapple, bright and citrusy). A vigorous annual in the Northeast bearing yellow cherry-tomato–sized fruits on bushes 3–4' tall and wide. A tender perennial in warmer climes, more tropical in nature than some others but selected for 5 years in our more temperate climes. Start seeds in early spring around the same time as tomatoes, transplanting out after all danger of frost has passed. Begin picking fruit in the fall as the husks around the fruit dry completely. The fruit lasts unrefrigerated for weeks in the husk. Great for jams, salsas, and fresh eating. ①



A=0.2g, $1.80 **B**=0.4g, $2.80

Your descriptions make me drunk with inspiration! Thank you. I need this shot of hope to remind me what's worth focusing on.
– Elizabeth Hendrix, Randolph, VT

Organically and sustainably grown seed was rinsed with a sodium hypochlorite solution to reduce risk of seed-borne disease. This treatment poses no health risks.

TOMATOES

Lycopersicon esculentum

Culture: Tender, cannot tolerate frost. Usually started indoors Feb–April. Avoid using fresh manure as it causes lush foliage with few ripe fruits. Instead use generous amounts of compost or well-rotted cow or horse manure to boost plant vigor, and crushed eggshells at the bottom of each hole for calcium. Heavy phosphorus needs. Responds well to foliar sprays.

Determinate (**Det.**) bush varieties may be staked, should not be pruned.

Indeterminate (**Ind.**) climbing varieties are customarily staked and pruned. Tomato experts Carolyn Male and Kokopelli's Dominique Guillet both oppose pruning, arguing more abundant foliage provides more photosynthesis.

Minimum germination soil temperature 50˚, optimal range 60–85˚.

For all tomatoes, days to maturity are from date of transplanting.

Diseases:

ASC	Alternaria Stem Canker	N	Nematodes
EB	Early Blight	SEPT	Septoria Leaf Spot
F	Fusarium	TSWV	Tomato Spotted Wilt Virus
GLS	Grey Leaf Spot	TMV	Tobacco Mosaic Virus
LB	Late Blight		

See pp 66–67 for more information about tomato diseases, particularly Late Blight.

TOMATO MIX

4149MO Heirloom Tomato Mix OG We'll mix a bunch of varieties (all organically grown seed) in one packet. You'll get different colors, sizes, shapes and flavors (no cherries). With an open mind, a good sense of observation, unjaded taste buds and acute deductive faculties, you can figure out which ones you like and order them by name next year. ~500 seeds/g. ①
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $26.00

Open-pollinated RED & PINK SLICERS

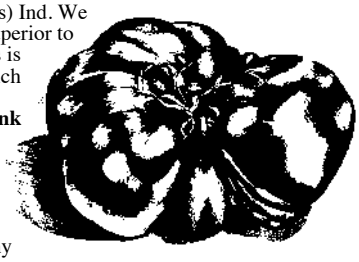
250-650 seeds/g.

4018LO Glacier OG (56 days) Det. with potato-leaf foliage. Glacier ripens **red** around the same time as the sub-arctics with about the same size (1–2"), and almost no cosmetic defects except yellow shoulders, but there the comparisons end. Glacier's rich tomato flavor relegates the insipid sub-arctics to the compost pile. It is also superior to the highly touted Siberia tomato, to Stupice, to Early Temptation, to Bloody Butcher, in fact, to every other tomato in the same class that we've tried. Originally from Sweden, 1985. ①②
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $25.00

4025SO Oregon Spring OG (58 days) Det. Recommended as a "hedge" in northern climates for cold summers. When most other varieties fail to ripen in time, Oregon Spring matures good-sized fruit in August, actually performing best during cool summers. Develops more cosmetic defects in the heat and humidity. Bears succulent almost seedless **red** fruits, up to 4" but somewhat variable. Tastes unusually good for such an early variety. Bred and developed from Russian parents by Dr. Baggett and released in 1984. Not suitable for market growers. Resistant to V. ①
A=0.2g, $1.70 **B**=0.4g, $3.00
C=1g, $5.00 **D**=2g, $8.00
E=10g, $25.00

4038CO Cosmonaut Volkov OG (65 days) Ind. "Sturdy, productive, cool-weather tolerant and great flavor," lauds Anne Elder. A superb home-garden variety with good commercial potential both outdoors and in tunnels, Cosmonaut always tastes good, occasionally sublime. Produced the best two tomatoes I've ever eaten, from different gardens in different years. Usually ripens quantities of **deep red** slightly flattened 8–12 oz globes at the beginning of August when tomato craving is at its peak. What makes Cosmonaut so special is its juice: sweet, rich and full-bodied. Even in cold summers, it will produce dependably by mid-August. Catalog editor Elisabeth Benjamin notes her Cosmonauts ripened nice fruits outdoors into early October this year, weeks after her other slicers had croaked. Volkov was the Russian explorer who fell through space. From Dnepropetrovsk in Ukraine, brought to America by the Seed Savers Exchange. ①
A=0.2g, $1.90 **B**=0.4g, $3.00
C=1g, $5.00 **D**=2g, $8.00
E=10g, $21.00

More Open-pollinated RED & PINK SLICERS



4049RO Pruden's Purple OG (72 days) Ind. We continue to dispute whether Pruden's is superior to Brandywine, but, opinions aside, Pruden's is early for its size and makes a great sandwich tomato. We are back to our customary potato-leaved strain that bears irregular **pink** 1 lb fruit with very few seeds, a silken texture and rich tomato taste, nicely tart with a balanced undertone of sweetness neither insipid nor cloying. Brett Grohsgal praises its flavor, productivity and disease resistance. We don't know why it's called purple, when it is not. ①②

A=0.2g, $1.70 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $22.00

4050ZO Bizhiki OG (75 days) Ind. In this fast-paced world of rapid changes, who remembers Buffalo greenhouse tomato? We last carried it a decade ago and lamented its demise when the breeder Enza Zaden dropped it. We also missed poking fun at a city whose weather we judged to be worse than ours. I was a tomato grower back then and have been searching ever since for a greenhouse tomato with the same fantastic flavor—that would do well in the Northeast. Ontario biodynamic farmer Cory Eichman, who has the same long memory, set to work selecting year after year from the original hybrid Buffalo for great taste combined with crack resistance. When he had met those criteria with a uniform bright **red** 3" globe-shaped open-pollinated tomato, he renamed it Bizhiki, the Anishinaabe word for Buffalo. ① **NEW!**

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4052KO KC 146 Tomato OG (75 days) Semi-Det. AKA Campbell's 146. When our seed buddy Nate Kleinman at the Experimental Farm Network touted this variety, we couldn't quite believe he was extolling a processing tomato—from Campbell's no less. But we value his opinion and grew it out to taste for ourselves. The results are in and now you can judge for yourself whether it has substantial fresh tomato flavor. Released in 1956 by Campbell's tomato breeder George B. Reynard, KC 146 became the flavor standard for their soup. It performed well for the times, being both wilt- and crack-resistant, but was eventually replaced by newer varieties with better disease resistance. The productive 5' plants produce a plethora of 9 oz. **red** round fruit with good rich tomatoey flavor. Good for canning, evoking childhood comfort food. Mmm'mmm good! ① **NEW!**

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4055TO Rutgers Original OG (75 days) Ind. Long considered an outstanding slicing, cooking and canning tomato, Rutgers' medium-sized 4–6 oz mostly uniform and unblemished deep oblate fruits with a **rich red** interior and pleasing texture have that great old-time flavor, delicious and juicy. When Rutgers University "refined" the variety in 1943, they took out some of the vininess but also some of the flavor. Our taste tests confirmed that the original indeterminate strain is better, so that's the strain we offer of this famous New Jersey tomato. The Campbell's Soup Co. developed it in 1928, a cross between Marglobe and JTD. Resistant to F1, V1, ASC, GLS. ①

A=0.2g, $1.70 **B**=0.4g, $2.90 **C**=1g, $4.70 **D**=2g, $7.50 **E**=10g, $21.00

4056RO Rutgers 250 OG (76 days) Semi-Ind. For years we've searched for worthy hybrid beefsteaks with flavor and texture beyond packing peanuts. So far, all we've found are insipid red blobs. Open-pollinated Rutgers 250 surprised us in our 2017 tomato trial: a super-uniform, solid, blemish- and crack-free tomato that looks and performs like a hybrid but has flavor! Rutgers University tomato breeders went back to the parents used to breed our original Rutgers strain, and this palm-size 1/2 lb **deep red** slicer is the prize result. Holding and ripening off the vine for at least 10 days, the interior becomes meaty and juicy by day 5. And a real sandwich-maker: tangy-tart with tomato-y depth, and lightly sweet. The "250" and the original Rutgers are very different tomatoes: 250 ripens a little later than the original, the immature skin color is paler green and the plant is a head shorter. ②

A=0.2g, $2.10 **B**=0.4g, $3.20 **C**=1g, $6.00 **D**=2g, $8.00 **E**=10g, $28.00

TOMATO DISEASES

Early blight shows up as drying and dying leaves *at the bottom of the plant*. EB can be managed culturally, should not result in significant crop loss. Mulching deters EB by reducing rain splash on foliage. Do not compost affected plants as EB can overwinter even on dead tissue.

Late blight usually starts on the foliage of the plant. Early in the season, late blight infection shows as roundish lesions on leaves that uniquely will *cross the center vein of the leaf*. Later, blotches appear on stems. Still later, hard crusty lesions form on fruits.

LB on tomatoes is not seed-borne. And does not survive on dead tissue. Letting plants freeze on the soil surface kills LB spores.

Septoria Leaf Spot can appear almost overnight. It is characterized by yellowing and small circular spots on older leaves. It can eventually spread to the entire plant in conditions of high humidity and temperatures. It can be spread by wind or carried on clothing and tools. Septoria can live over the winter on live tissue, so don't compost affected plants.

4067RO Rose de Berne OG (80 days) Ind. This Swiss émigré could be considered the Brandywine of continental Europe. Like Brandywine, it has many strains, and is widely considered in France, Germany and Switzerland to be the best-flavored tomato. Only medium-sized, yet delivers the robust flavor of the bigger types. It bested some formidable competition in our trials with a rich sweetness the others couldn't match and still can't. This year's taste test confirmed it's the best **pink** for its size. No slouch in the appearance department either, the unblemished globes are perfectly round, the soft skins not excessively fragile and the color and size very attractive, making it another excellent field-to-market variety that does not require high tunnels. David Nonnenmacher reports from Hawley, PA, that Rose was "the only heirloom to resist the onslaught of tomato diseases in the cold of August 2017 and then ripen beautifully in the warmth of September." Some LB tolerance. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

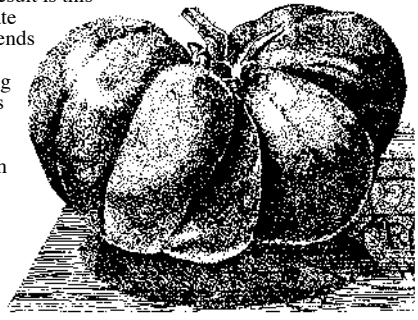
4069GO German Johnson OG (80 days) Ind. An old heirloom probably from Virginia or North Carolina. This large regular-leaf plant, one of the parents of Mortgage Lifter, is known for its copious yields of **pink** meaty fruits often exceeding 1 lb, mild with more than a touch of sweetness. ③

A=0.2g, $1.80 **B**=0.4g, $2.90 **C**=1g, $4.50 **D**=2g, $7.00 **E**=10g, $19.00

4071KO Soldacki OG (80 days) Ind. You won't find a better sandwich tomato than Soldacki, a heavy producer of meaty tasty 14 oz **pink** globes with a good mix of sweetness, tartness and real tomato flavor. Tall potato-leaf vines. Originally from Krakow, Poland, brought to Cleveland, OH, around 1900, then to Albany, NY. Prone to cracking in wet seasons. ②

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00

4075BO Pink Brandywine OG (82 days) Ind. Potato-leaf foliage. Pink Brandywine is the heirloom that launched a movement, leading many gardeners to be flavor-positive preservation-aware seed-savers. But as Brandywine's popularity exploded, so did its production as commercial bulk seed. Like all heirlooms, our favorite old-fashioned OPs with their hand-selected hand-me-down genetics need special care. We've partnered with Daniel and Corinne at Blackbird Rise of Palermo, ME, to keep building the Brandywine legacy. Through four summers they've raised hundreds of plants from our classic Sudduth/Quisenberry strain and selected for that perfect Brandywine color, flavor, bountiful size and shape that says "homegrown comfort." The result is this extra-select strain of 1 lb oblate **pink** meaty beefsteaks that trends away from small-fruited, less-vigorous and late-ripening traits. Of course, that precious balanced deep flavor with perfect hints of tart still rings true! Ripens unevenly through the season. ①



A=0.2g, $1.90
B=0.4g, $3.00
C=1g, $5.00
D=2g, $8.00
E=10g, $25.00

PREVENTING LATE BLIGHT

Dry conditions spare us some years, but late blight is here to stay, especially for field-grown crops. Cool temperatures, moist conditions, still air and lack of sunshine favor sporulation; spores can occur and advance in any condition of high humidity. LB might spread quickly…or not; wind-borne spores can travel hundreds of miles on storm fronts, but also can be baked into submission by the hot sun. Once LB lesions develop on your plants take immediate action to halt the disease in hopes of salvaging a crop. Our recommendations:

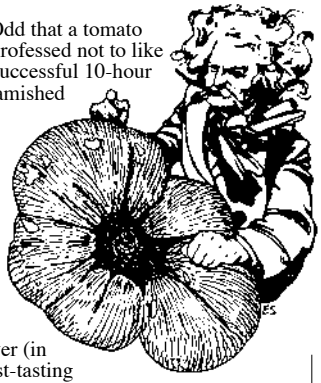
- Where possible, use resistant varieties.
- Try to find tolerant cultivars—use anecdotal evidence and experiment.
- Grow your own tomato plants or buy locally grown seedlings. Avoid big-box seedlings. Know your farmer!
- Do not use saved potatoes as seed stock. Purchase only new certified disease-free seed potatoes. More potato info on pages 117 and 124.
- Plant in areas with full sun and few wind blocks. Avoid shade and moist environments. Facilitate air movement. Maintain high soil fertility.
- If you choose to spray, have a plan and materials on hand, so you can make quick and timely application(s) when conditions indicate. More about control materials at right, and beginning on p. 145 in our Organic Growers Supply section we offer a full roster of products.
- Most market growers and many home gardeners now grow at least a portion of their tomatoes under cover, which greatly reduces vulnerability though still requires vigilance.

INFORMATION SOURCES

See **vegetablemdonline.ppath.cornell.edu/** for excellent photos and info.

University of Maine Cooperative Exension: Potato IPM bi-weekly tells where LB infections have been confirmed in Maine or the eastern United States. umaine.edu/potatoes, 1-888-USE-UMCE.

Or use the forecast model uspest.org/risk/tom_pot_map to assess potential for spore germination and lesion formation in your area.

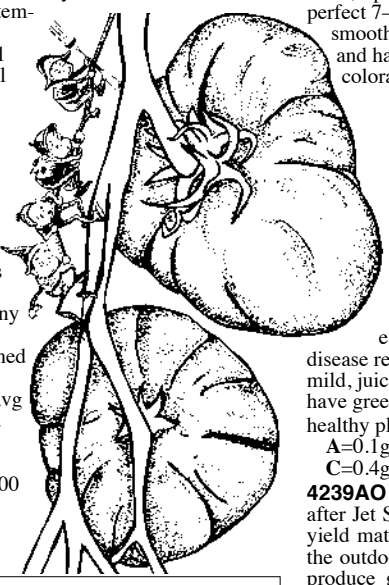


4081MO Mark Twain OG (85 days) Ind. Odd that a tomato would be named for the famous writer who professed not to like them. He did write a 1906 story about an unsuccessful 10-hour wild turkey chase in his youth that left him famished and lost in the woods. He rescued himself by finding a garden full of ripe tomatoes. We don't know the history of this obscure heirloom that might be as old as his story. The tomato is rare, but worth preserving on the strength of its deep **red** interior color and full-bodied flavor. These tomatoes are good-sized and crack free, though soft so they won't take a lot of handling. Twain puts out a lot of ribbed 8–24 oz oblate fruits in September. Though we know of no other commercial sources and of only one seed saver (in Wisconsin) maintaining it, it is one of the best-tasting heirloom beefsteak tomatoes. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4083WO Weisnicht's Ukrainian OG (85 days) Compact Ind. with potato-leaf foliage. Thanks to Ryan Voiland of Red Fire Farm in Granby, MA, for helping put this little known but extremely tasty heirloom on the map. In 2015 at the annual MA commonwealth tomato contest in Boston, Voiland won first prize in the heirloom category for his entry of Weisnicht's. A panel of food writers, chefs, produce experts and state officials judged the tomatoes on flavor, firmness/slicing quality, exterior color and shape. The oft-bi-lobed medium-large 8–18 oz scrumptious **pink** fruits are sparse seed bearers. The flavor—sweet, rich and complex with delicious acid overtones—received an unusually high 4–4.5 out of 5 in my taste evaluations. They begin producing in late August or early September with a 3–4 week moderately productive main harvest period. One cold wet summer, it ranked #1 among the 43 varieties I grew. We got our original seeds from Scott Weisnicht of Waupun, WI. Weisnicht also supplied us with our first seeds for the much-revered rare **984** (p. 42) Pride of Wisconsin melon. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00



4087TO Tiffen Mennonite OG (86 days) Ind. This heirloom from Mennonites in Wisconsin was first introduced to the Seed Savers Exchange by Thane H. Earle of Whitewater, WI. Tiffen has many similarities to the more famous Brandywine—potato-leaf foliage, **pink** skin, and rich old-fashioned tomato taste that has twice drawn raves at staff tastings. The large rough oblate beefsteak fruits (avg 13 oz) are a tad bigger and later than Brandywine. For a superb sandwich tomato or a fresh garden snack Tiffen is hard to top. ③

A=0.2g, $1.70 **B**=0.4g, $2.80 **C**=1g, $4.00 **D**=2g, $6.50 **E**=10g, $20.00

Disease: Early Blight
Cultural controls: Rotation; avoid stressing plants; staking; minimize leaf wetness; mulching; indeterminate varieties are more resistant/tolerant; disinfect stakes & cages.
Material: Regalia (**8693**), Actinovate (**8702**), Serenade (**8705**), Companion (**8708**).

Disease: **Late Blight**
Cultural controls: Destroy cull potatoes & potato volunteers, avoid overhead irrigation.
Material: Regalia (**8693**), Copper (**8672**), Companion (**8708**), Serenade (**8705**).

Disease: Septoria Leaf Spot
Cultural controls: Space plants for good air circulation.
Materials: Copper (**8672**); Regalia (**8693**), MilStop (**8666**), Companion (**8708**), Sulfur (**8684**, **8690**).

Diseases: Bacterial Canker, Speck and Spot
Cultural controls: Disinfect greenhouse materials & cages, farming tools & gloves; avoid overhead irrigation; don't work crop when wet; rotate crops; use compost.
Material: Copper (**8672**), Regalia (**8693**).

Disease: Anthracnose
Cultural controls: Rotation; mulching; minimize plant wetness; staking; use compost.
Material: MilStop (**8666**), Copper (**8672**), Regalia (**8693**), Serenade (**8705**).

Pest: Tomato Hornworm
Control: Look for frass (droppings) and handpick. Eeeuww! Use a blacklight to find them. They make great chicken feed!
Material: Bt *kurstaki* (**8753-6**), Spinosad (**8762**).

Pest: Tarnished Plant Bug
Cultural controls: Floating row covers (**8874**), good weed control.
Material: Pyrethrum (**8765-8**).

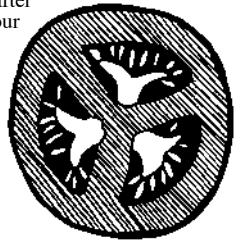
Hybrid RED & PINK SLICERS

300-500 seeds/g.

4211PM Premio (60 days) Ind. A primo early cluster tomato and a centerpiece for my new tomato strategy *sans* hoophouse: to depend on the new generation of flavorful cluster hybrids such as Premio and **4225** (p. 72) Mountain Magic for September production after rains and blights have beaten down my favored heirlooms. Delicious Premio gets that job done—between Aug. 31 and Sept. 14, I harvested 97 of its perfectly round **red** uniform thick-skinned almost 4 oz fruits from just two plants. These ripen 4–8 to a cluster, firm but juicy and refreshing with nice texture, sweetness and flavor and awesome holding quality in the field. Cascades of them keep coming and coming. ⑤

A=20 seeds, $3.20 **B**=40 seeds, $5.80 **C**=100 seeds, $11.00 **D**=500 seeds, $42.00

4233JS Jet Star (72 days) Compact Ind. As hybrids go, Jet Star has been around for a long time. The 1979 Harris catalog reported, "Our Jet Star met with as great a reception as any introduction we ever offered." Almost 30 years later it remained their best-selling hybrid tomato. In a test of 16 commercial varieties grown in high tunnels at Highmoor Farm, it had the highest yield of total marketable and premium-quality fruit. The University of Maine Food Lab also rated it the top greenhouse tomato. Year after year it was the best early full-sized **red** tomato in our trials, ripening prolific quantities of cosmetically perfect 7–8 oz globes with outstanding flavor. The smooth firm fruits almost never scar or crack and have excellent interior and exterior coloration. Resistant to F1 and V. ⑤



A=20 seeds, $2.00
B=40 seeds, $3.60
C=100 seeds, $7.00
D=500 seeds, $25.00
E=1,000 seeds, $40.00

4238LO Luci 2103 OG (73 days) Ind. Replacing Buffalo in our greenhouses, uniform productive 6 oz Luci was the first of its class to ripen in our trial, setting about 10 clusters, each with 3–4 fruits. We loved Luci for its earliness, uniformity, high yields and disease resistance. **Red** fruits are flavorful, mild, juicy, a little mealy, rarely crack, never have green shoulders. Beautiful sturdy vigorous healthy plants show good leaf cover. ③

A=0.1g, $2.70 **B**=0.2g, $5.00 **C**=0.4g, $8.00 **D**=1g, $15.00

4239AO Arbason OG (76 days) Ind. While first harvest is a few days after Jet Star, we found this reliable OG hybrid's steady and prolonged total yield matched that of J-Star in both the high tunnel and the open field. As the outdoor picking season for many varieties waned, Arbason continued to produce good-tasting consistent 7–9 oz **red** fruits. Likewise in the high tunnel, while the ripening of many varieties slows to a crawl once leaf mold establishes, Arbason kept the harvest coming even with moderate disease. University trials in PA, NH and ME also showed Arbason with high yields and high percentages of marketable fruit. With no cracks or blemishes, these dense red globes stand up to the sorting and after-ripening demands of market farmers. We find flavor continues to improve 7–10 days off the vine. Pruning clusters to 4 or so will keep fruits large. Resists F0-1,V, TMV. ④ **NEW!**

A=10 seeds, $6.00 **B**=20 seeds, $8.00 **C**=40 seeds, $15.00 **D**=100 seeds, $30.00 **E**=500 seeds, $140.00

4241MT Momotaro (78 days) Vigorous Ind. This **pink** gem, a study in delicacy and nuanced flavor, deservedly the dominant fresh-market tomato in Japan, came to the States where it was re-named Tough Boy. Crack tolerant though anything but tough, these tennis ball–sized round 4–7 oz fruits borne 6–7 to a cluster are noteworthy for their well-balanced, intensely rich and sweet, slightly acidic flavor. CR grew and enjoyed them in 2012. Independently, Heron and his crew picked them out as superior in their 2016 trial, even though they aren't way productive. This hybrid truly tastes as good as any mid-sized open-pollinated heirloom. V, F and N tolerant. ⑤

A=10 seeds, $5.50 **B**=20 seeds, $10.00 **C**=40 seeds, $18.00 **D**=100 seeds, $40.00

3999SP Potassium Nitrate (KNO_3) Also known as saltpeter, used to soften the coat of many seeds to expedite germination. Recommended for brassicas, eggplant, peppers, tomatoes, basil, endive, radicchio, and most flower seed. Comes in fine granular form. Dilute 1/2 tsp in 1 qt water. Use as a pre-soak for seed or to water seedling flats. 10g packet contains 2 tsp. *Note: Not allowed for certified-organic use.* ③

A=10g, $1.70

Open-pollinated SLICERS OF OTHER COLORS

250-650 seeds/g.

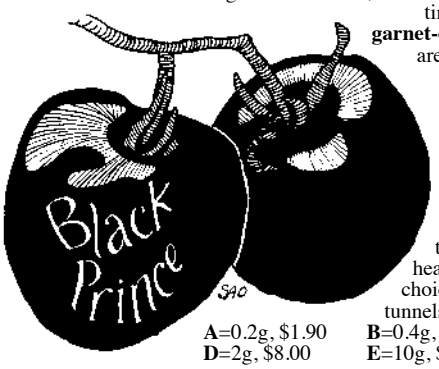
4041BO Pink Berkeley Tie-Dye OG (68 days) Compact Ind. Here is a tomato variety with a name and appearance we ex-hippies can love. Tie-Dye is not only the best of all the "Boar Series" tomatoes released by talented breeder Bradley Gates of Wild Boar Farms in Napa, CA, but it is also by far the best of all the new tomatoes I've tried. Forget the rest of the Boars (good as many of them are), forget the Artisans™, forget especially the weird-tasting Indigos—Tie-Dye has real flavor. Not only flavor but also amazing early productivity, size, disease tolerance, and is it ever a looker. In a jungle among some 15–20 other varieties, this beefsteak accounted for at least half of my early ripe full-sized tomatoes for the second year in a row. Fruits usually bi-lobed, averaging about 9 oz, the color of **port wine with metallic green stripes**. They have an engaging tanginess, almost as if lightly salted. The spiciness is just what you might expect from this striped beauty. Seems to hold up well in the field and after picking. A winner both for the marketer and the home gardener. ②

A=0.2g, $3.30 **B**=0.4g, $6.00 **C**=1g, $14.00 **D**=2g, $25.00 **E**=10g, $90.00

4045PO Garden Peach OG (71 days) Ind. **Yellow** fruits **blush pink** when ripe and have thin fuzzy skins somewhat like peaches, soft-skinned, juicy and very sweet. Light fruity taste is not what you'd expect in a tomato. Burpee in 1893 called it "delicate, melting in the mouth like a grape." For well over a century savvy gardeners have brought Peach's little 2–4 oz fruits indoors before frost to keep for several weeks. Jim Stockwell from North Carolina would not be without it. "Not only are they early and prolific but their unusual flavor and no core sizes make them perfect for grilling without falling apart." Doreen Mundie says also wonderful dried. Amy Goldman places its 1890 origins with plant breeder Elbert S. Carman, owner and editor of *The Rural New-Yorker*. It was introduced as a novelty in the 1890 catalog of Hallock & Son's of Queens, NY. Showed some tolerance to LB in Colrain in 2014. ③

A=0.2g, $1.80 **B**=0.4g, $2.80 **C**=1g, $5.00 **D**=2g, $7.00 **E**=10g, $22.00

4053PO Black Prince OG (75 days) Ind. In 1997 when we were among the first to offer this émigré from Irkutsk, Siberia, we were way ahead of our time. These iridescent 5–7 oz **garnet-colored** globe-shaped fruits are among the most uniformly handsome in the tomato kingdom. This prince has earned a reputation for outstanding flavor similar to that of Black Krim, but without Krim's fragility and tendency to crack. A superior home-garden tomato that is also a reliable heavy-yielding field-to-market choice for growers without high tunnels. ①



A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4054GO Goldie OG (75 days) Ind. Considered synonymous with Dixie Golden Giant. Deep orange beefsteak fruits, frequently bi-lobed, average 16–20 oz. Though reputed to be more than 150 years old, Goldie was introduced commercially in 1977 by Gleckler's Seedsmen. I rate it as the best of all **orange** tomatoes, delivering its rich flavor with an extraordinary velvety texture. Often Roberta's first large tomato to ripen. Erica Myers-Russo from CT advises, "Don't harvest it until it has a distinct rosy blush" (on the bottom). Very productive. Will catface under cold or excessively wet conditions. Several people who grew our Heirloom Mix said Goldie was their favorite. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4058 Cherokee Green OG (75 days) Ind. Tomato expert Craig LeHoullier noticed and selected this mutant of Cherokee Chocolate around 1997. Scarcely a generation later, many consider Cherokee Green to be the best-tasting **green** tomato. Not an heirloom, but tastes like one. And for our staff taste buds, it has it all: assertive taste with just the right acidic balance and a complexity that pops it above the average in the almost fourscore tomato varieties we trialed. The 8–12 oz beefsteak fruit ripen green with an amber tinge at the blossom end when fully ripe. Productive and with a bit of disease tolerance. **BR** ① **NEW!**

A=0.2g, $2.00 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $22.00

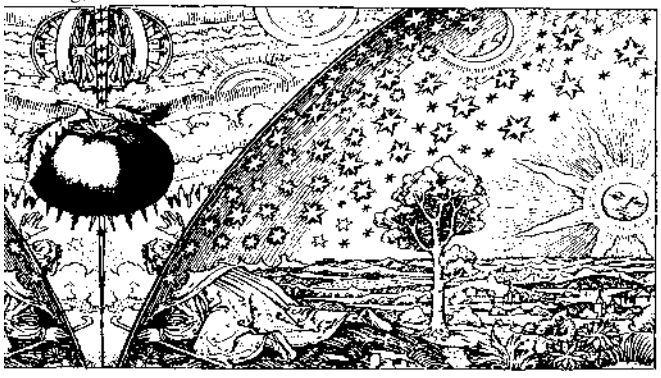
Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

4057GO Green Zebra OG (77 days) Ind. A most unusual beast in the tomato menagerie, this zebra starts out **green with darker green stripes**, softening and **blushing yellow and apricot** when it ripens. It might have remained a mere curiosity but for its delicious sweet rich flavor. Small-medium 4–5 oz fruits are emerald green inside. Perfect exteriors hold up under adverse conditions and don't crack. "The perfect salad tomato," says Anne Elder. Sometimes incorrectly shows up on lists of heirloom tomatoes, but was developed by Tom Wagner of Tater Mater Seeds in 1985 from four heirlooms. Kent Whealy ranks it in his top ten tomatoes. Susceptible to SEPT. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $7.00 **E**=10g, $19.00

4059CO Cherokee Purple OG (77 days) Ind. but with relatively short vines. No list of the best-tasting heirloom tomatoes would be complete without Cherokee Purple, an unusual variety from Tennessee said to have originated with the Cherokee Indians. Fruits are globes to slightly oblate, averaging 10–13 oz, with dusky **brownish-purple skin**, **dark green shoulders** and **brick-red flesh**. The real attraction is their rich taste, described as "sweet rich juicy winey," "delicious sweet," and "rich Brandywine flavor" by aficionados maintaining it in the Seed Savers Exchange. Ranks in my top five for flavor. Expect some concentric cracking. Amy LeBlanc suggests the vines should not be pruned because the delicate fruits sunburn easily. **IR** ②

A=0.2g, $1.70 **B**=0.4g, $2.90 **C**=1g, $4.50 **D**=2g, $7.00 **E**=10g, $21.00



4060BO Paul Robeson OG (78 days) Ind. This Russian heirloom was named in honor of Paul Robeson (1898-1976) who befriended the Soviet Union. Athlete (15 varsity letters at Rutgers), actor (played Othello in the longest-running Shakespearean production in Broadway history), singer (world famous for his vibrant baritone renditions of Negro spirituals), orator, cultural scholar and linguist (fluent in at least 15 languages), Robeson was an outspoken crusader for racial equality and social justice. Revered by the left, reviled by the right, he was blacklisted during the McCarthy Era and beyond, harassed by the FBI, his passport revoked for eight years, his career stifled. He died broken and almost forgotten, his life a testament to lost opportunities in 20th-century American history. His namesake tomato developed almost a cult following among seed savers. The **maroon-brick** 6–12 oz oblate often bi-lobed fruits **with dark green shoulders** come closest in flavor to Black Krim, but claim their own distinctive sweet smoky taste. A sandwich tomato with a tang, an extraordinary tomato for an extraordinary man. Some tendency to split. "Does great on my farm in MS," reports Will Reed of Native Son Farm in Tupelo. ①

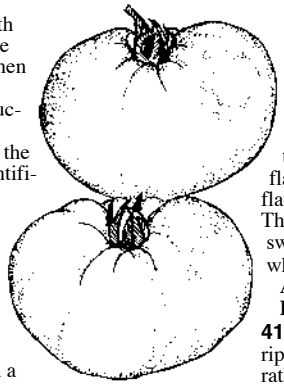
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $4.60 **D**=2g, $7.50 **E**=10g, $24.00

4061KO Black Krim OG (80 days) Ind. Don't wait too long to harvest this delicate heirloom tomato. At half green and still firm they are already dead ripe and perfectly delicious. If you wait till they are fully purple, you will not be able to get them from garden to table intact (to say nothing of market) and they will disintegrate like a hunk of road-kill. Krims are strikingly **iridescent purple** on the outside, usually with **dark green-black shoulders** and noticeable catfacing. Interiors are part black, too, with an unusual juicy yet meaty taste and texture, described as having "…a smoky flavor like a good single malt scotch." Fruits average 12–18 oz. Krim hails from Krymsk on the Black Sea in Russia. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4065JO Golden Jubilee OG (80 days) Ind. Amy Goldman describes its flavor as "sprightly" and says it was a favorite of Ben Quisenberry of Big Tomato Gardens in Syracuse, OH, who offered it under the name Golden Sunray. The best medium-sized open-pollinated **orange** tomato, Jubilee ripens smooth-textured sweet mild meaty 8 oz globes. Pruning will produce larger fruits. Nikos discovered Jubilee at a Waldo County Extension taste test at Unity College. She brought one in and it was superb, almost on a par with Goldie both for texture and flavor. Jubilee is smaller than Goldie and less prone to blemish. A cross between Tangerine and Rutgers, it won an AAS for Burpee in 1943, the year W. Atlee's son was born. Resistant to ASC. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00



4076YO Yellow Brandywine OG (82 days) Ind. with potato-leaf foliage. Growing Yellow Brandywine can be maddening. When it's good, it's very very good, but when it's bad it's awful. All strains (and there are several) develop irregularly-shaped fruits in extreme weather fluctuations. Good appearance correlates closely with good eating quality. Compost the weird-looking fruits; enjoy the good ones! Large slightly ribbed 1 lb fruits with an identifiable ring scar at the blossom end are often remarkably smooth, with a creamy texture and rich complex tangy flavor. Not the highest yielding. In the running for best **golden** tomato, but by no means a shoo-in. ②
A=0.2g, $1.80 **B**=0.4g, $2.90 **C**=1g, $4.50
D=2g, $7.00 **E**=10g, $23.00

4077NO Pineapple OG (85 days) Ind. Garden author Michelle Owen says, "I roast…these exceptionally sweet **red-streaked yellow** tomatoes…in a hot oven, then sauté with ridiculous amounts of garlic, rosemary and extra virgin olive oil and throw over pasta. Before I face the firing squad, I will ask for this as my last meal." With its silky smooth texture and complex fruity taste, Pineapple may be the best striped tomato. Typically grows huge fruits in excess of 1 lb that get a little funky cosmetically. Fruits hold tight to stems so bring scissors to your harvest. Cut in half, it looks like the interior of a pineapple except with yellow and red marbling. It doesn't taste like a pineapple, though, nor like a typical red tomato, either. Its unique mild low-acid fruity sweetness needs a fruit name all its own. Originally from Kentucky, but our seed stock came from Martha Gottlieb of Common Ground Fair Exhibition Hall fame. ①
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $7.50
E=10g, $25.00

4080AO Aunt Ruby's German Green OG (85 days) Ind. "The biggest surprise I've ever experienced in tomatoes," said the late Chuck Wyatt, vintage tomato collector. Until you try it, you won't believe a **green** tomato could be this good. I rate it second only to Brandywine for flavor and it is on just about everyone's top-ten list. Oblate 12–16 oz fruits **blush lightly yellow** and develop an **amber-pink tinge** on the blossom end when ripe. Don't allow them to get too soft before picking. The **green flesh** of this beefsteak is faintly marbled with pink. Flavor sweet and tart, rich and spicy. The central large tomatoes are the best. Flavor deteriorates when cold weather sets in. Created a sensation at a staff taste test where it was rated "good" or "excellent" by all who tried it. Aunt Ruby's is not just the best green eating tomato, it also makes a delicious basis for a green salsa. Originally from Ruby Arnold's German immigrant grandfather, introduced in the 1993 Seed Savers Exchange Yearbook by Bill Minkey of Darien, WI. Nominated to Slow Food's Ark of Taste. ③
A=0.2g, $1.70 **B**=0.4g, $2.90 **C**=1g, $4.50 **D**=2g, $7.00
E=10g, $20.00

4086BB Weaver's Black Brandywine (85 days) Ind. Potato-leafed. Also known as **True Black Brandywine**. Not the only attempt at pairing smoky depth of "black" tomatoes with the full tart and sweet balance of Pink Brandywine, but Weaver's Black could be the oldest and is likely the best flavored. Bred by Dr. Harold Martin in late 1920s in Pennsylvania, its irregular flattened large heirloom beefsteak shape looks **coal-dusted over crimson**, **with shadows of green, purple and brown**. Winner of our 2016 taste trial of dusky types, Weaver's flavor intensity of peaty whiskey and rich tomato is not for the faint of heart, and everyone who tries it will have an opinion. Given safe harbor by William Woys Weaver's Roughwood Seed Collection since being kept by his grandfather. The usual delicate handling and quick consumption rules of cherished heirloom tomatoes apply. ②
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $24.00

4097RG Ruby Gold (90 days) Ind. As aesthetically appealing as it is delicious, Ruby boasts prolific beautiful huge red-streaked yellow fruits with marbled interior flesh, meaty with superb mild sweet flavor, smooth melting texture and not a bit of acidity. Introduced by John Lewis Childs of Floral Park, NY, in 1921. Rediscovered by tomato aficionado Ben Quisenberry in Bob's Market in Mason, WV, in 1967. Quisenberry offered it under three different names, first Early Sunrise, later Gold Medal and finally Ruby Gold, calling it "the sweetest tomato you ever tasted." Gigantic 1–3 lb fruits with gigantic flavor. Tomato cognoscenti rate it as one of the best. Fruits slightly flattened with red spot on the blossom end, seldom cosmetically perfect, prone to radial cracking. ① **BACK!**
A=0.2g, $2.20 **B**=0.4g, $3.30 **C**=1g, $5.50 **D**=2g, $9.00
E=10g, $25.00

Open-pollinated STUFFING TOMATO

4084SC Schimmeig Striped Hollow ECO (85 days) Ind. Despite its scant sales, we refuse to drop this beautiful mostly hollow stuffing tomato. "If only we could teach people about mixing bread crumbs, sour cream, salt, pepper and parmesan cheese for stuffing, these perfect baking tomatoes would really sell," predicts Anne Elder. Sturdy plants filled with clusters of 2½–5 oz **red** fruits delicately painted **with thin stripes of gold**. Perfectly shaped like small tri-lobed bell peppers, Schimmeigs stand up straight, hold their shape and melt in your mouth. ①
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $24.00

Open-pollinated PASTE TOMATOES

300-500 seeds/g.

4123MO Mr. Fumarole OG (65 days) Ind. The same cultivar we formerly sold as Mr. Fumo. This large elongated 3–6" **pinkish** plum tomato was a winner in our 2007 paste test. Comments included "top of the line, rich, complex," "has a crispy brown flavor that lingers," "very flavorful, sweet meaty good," "nice blend of flavors, tart but full tomato flavor," and "sweet, somewhat bland but haunting. I would try it again." Though tough-skinned, can also be eaten out of hand where its tart sweetness pleases. Fair yields. Did not get blossom-end rot, even in 2011 when that disorder was prevalent in other paste varieties. ☙2009. ①
A=0.2g, $1.70 **B**=0.4g, $2.80 **C**=1g, $4.50 **D**=2g, $7.00
E=10g, $20.00

4125HO Heinz 2653 OG (68 days) Det. An early **red** plum type that often ripens all its 2½–3 oz fruits before frost. Firm fruits for cooking, on compact rather homely plants. "The perfect canning tomatoes for a short season huge late blight pressure area. Small, loaded plants, fruits stayed clean even after all the leaves were gone. Most ripened at once so I could collect a huge canner load from a small number of plants," reported the Wolperts from WV. Resists F and V. ①
A=0.2g, $2.00 **B**=0.4g, $3.20 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $25.00

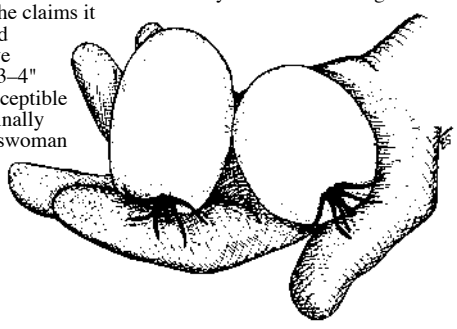
4131GO Grandma Mary's OG (68 days) Ind. In Zone 4 Sangerville, ME, Jeanne Griffin selected seed from this heirloom for 6 years for earliness and fruit size. Grandma's meaty 6–10 oz **red** fruits are very early for their size. Grandma produces fruit even during cold summers. ☙1992. ①
A=0.2g, $1.90

4133LO Bellstar OG (74 days) Det. Bred at Smithfield Experiment Farm in Ontario and introduced in 1981. Bears **red** 4 oz round paste tomatoes much larger than most others of this type. Delicious flavor is also good in salads. Ripening is spread over a long season. ①
A=0.2g, $2.10 **B**=0.4g, $3.50 **C**=1g, $6.00 **D**=2g, $9.00
E=10g, $30.00

4135PO Opalka OG (82 days) Ind. Its third time in our taste test proved the charm for Opalka. Our tasters have commented, "an oasis of flavor in a desert of tomato hell," "a pleasing texture and good aftertaste lingers," "round and mellow flavor…full-bodied." Expect copious yields of 3x5" massive solid bull's horn–shaped **red** fruits with dry texture and few seeds. Also dries well. While some tomatoes falter during hot dry spells, Opalka produces consistently. The crinkly foliage is normal and not an indication of plant disease. Polish heirloom brought by the Opalka family to Amsterdam, NY, around 1900. A shy seed producer, it consistently gets dropped for that reason by commercial enterprises, so we're happy to be able to offer it, grown by our very own Roberta Bailey. ①
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $27.00

4136VM Vilms ECO (82 days) Ind. What struck me first were the plants: so green, so healthy, without the frilly fern-leaf foliage of most other paste types, with short but strong stocky stems. I counted set after perfect set of small plum pastes. First harvest was mid-August with 20 lbs of blemish-free **blood-red** nippled 2 oz plums from 30 plants. Then 40 lbs the next week. Diseases came, Vilms persevered. Another 40-lb week, and another. While other paste varieties went under from blights or rotted, Vilms sweetened merrily in their 20-lb boxes for up to three weeks with few losses. Co-workers who devoured the solid but moist two- or three-bite plums found them good. Whether in salads or sandwiches all were picture-perfect and tasty. When Vilms finally succumbed to weather and fungus, I thrice more gleaned after-ripened fruits from the leafless remains. A multi-purpose, easy-to-grow beauty. ①
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $25.00

4137NO Orange Banana OG (85 days) Ind. I never would have believed that the best tomato sauce comes from an **orange** tomato. But the proof is in the eating and Orange Banana has been a perennial winner of our annual paste taste-offs. Comments from tasters include, "the best flavor and sweetness yet, wow!" and "gourmet candlelight." No wonder Banana has become a staple of David Shipman's famous tomato sauces. Its sprightly sweet flavor, reminiscent of Sun Gold but with more depth and diverse tones, makes an ambrosial sauce by itself and adds a vivid fruity complexity to any sauce with other tomato varieties. Erica Myers-Russo in CT grows it exclusively for drying. She claims it "makes the sweetest dried tomatoes ever." Attractive cylindrical orange fruits 3–4" long average 4–5 oz. Susceptible to blossom-end rot. Originally offered by Moscow seedswoman Marina Danilenko in the 1996 Seed Savers Yearbook. ①



A=0.2g, $1.90
B=0.4g, $3.00
C=1g, $5.00
D=2g, $8.00
E=10g, $26.00

4138RO Speckled Roman OG (85 days) Ind. "A knock-out at market last year. Eye-catching with **yellow-striped scarlet** skins. My customers bought them singly for fresh eating and in baskets for cooking into sweet sauces," relates Elizabeth Bangley of Hawk's Hill Farm in Georgetown, PA. John Swensen's psychedelic-looking creation ranked near the top in our 2005 sauce test for its rich tomatoey sweetness and good texture. Roman's red cylindrical fruits are covered with orange-yellow striations, something like an Amish Paste with stripes from an Orange Banana. The actual parents are Antique Roman and Banana Legs, and the fruits have the distinctive nipple of the latter. Plants bear an early abundance of meaty 4–5 oz fruits. *Susceptible to disease in cool wet seasons.* ①②

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $24.00

4140AO Amish Paste OG (85 days) Ind. Always among the most popular items in the Seed Savers Exchange. Listed members' comments tell all: "large red meaty fruit," "wonderful paste variety," "great flavor for cooking, canning or fresh eating," "the standard by which I judge canning tomatoes," "huge production," "great for sauces, salsa, canning." Strong producer of oxheart fruits up to 8 oz with thick bright **red** flesh. Larger and better than Roma. Flavor has been consistently good even in poor tomato years. Wisconsin heirloom from Amish farmers in the 1870s, first surfaced in the 1987 SSE Yearbook. We have observed some inherent variation, based on how this variety responds to its environment. Needs room and good nutrition to set mostly nippled fruits. Crowding, shading or stress reduces fruit size and nippling. Boarded Slow Food's Ark of Taste. ②③

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $23.00

4141HO Hog Heart OG (86 days) Ind. Brought from Italy to Massachusetts, probably between 1910 and 1920, and then by Susan Eastman and Ed Lacy of Gray, ME, to the Exhibition Hall at the 1988 Common Ground Fair, Hog Heart has won many admirers. So-named because it sometimes produces large **red** heart-shaped double fruits. Elisabeth Benjamin grew a triple in 2013 that weighed 3 lb 7 oz! More often, though, its 6–8 oz tomatoes are shaped like banana peppers. A meaty paste tomato noted for its sparse seed cavity, good solids and excellent flavor fresh, canned or frozen. It is late for extreme northern areas and some fruits catface. "For my money the best paste tomato going," says Amy LeBlanc. ☙1999. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4146BB Blue Beech ECO (90 days) Ind. This large elongated **red** paste tomato won our sauce test in 1997, besting several well-known varieties. We received seed from Annette Smith of Blue Beech Farm in Danby, VT, and have named the variety in her honor. Smith got the tomato from her neighbor's niece's uncle who brought it to Vermont from Italy during World War II. This Roma type has been acclimated in chilly Vermont for the last 50 years, so it is better adapted to cold climates than Roma. Some years it makes a richly textured sweet sauce that's just brimming with flavor. "Also very fine for fresh eating," says Lillian Kuo of Orleans, MA. Fruits, not very seedy, averaging 6–8 oz, often have green shoulders. Needs long season, but our increasingly mild extended falls have facilitated ripening. ☙1999. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

Hybrid PASTE TOMATOES

~350 seeds/g.

4290PR Plum Regal (75 days) Det. Fedco staff whipped up a day-long paste-taste this year, saucing 20+ varieties. Plum Regal topped the hybrids and had high marks even compared to some excellent heirlooms. Its deep red sauce was smooth, meaty, with paste-y rich full flavor and a nice acid balance. No bitter or metallic hints, and also did not err into saccharine-sweet tones. Adding to the overall package, Regal is late blight resistant, and moderately resistant to early blight. Even on a determinate plant, the ability to withstand disease pressure really shows up in a high yield. This variety has been making a name for itself among home canners and sauce-makers: you know you will get enough tomatoes and the end results will be delicious. High resistance to LB, F, V, TSWV; intermediate resistance to EB. ④ **NEW!**

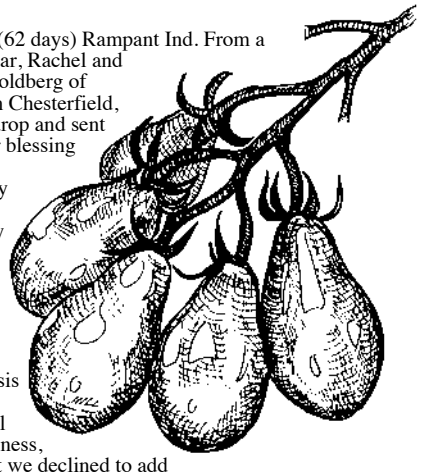
A=10 seeds, $3.00 **B**=20 seeds, $5.00 **C**=40 seeds, $9.00 **D**=100 seeds, $18.00 **E**=500 seeds, $70.00

4296PT Pasta (84 days) Ind. In our taste tests, we ate Pasta without pasta —and without spice, herb, pepper or salt—since we want to ascertain the true flavor of the tomato sauce. And these 2–3½ oz **red** paste plums blend wholesome sweetness and tartness into a thick delicious warm bright red sauce. Either as a single-variety sauce or as the solid base for your paste harvest mix, you can't go wrong with Pasta. Large healthy hybrid plants manage to resist and outgrow most diseases while putting out lots of high-quality fruits with robust flavor. Resistant to N, V, and TMV. Tolerant to many physiological problems. *Last year we will carry; supply limited.* ④

A=0.1g, $2.60 **B**=0.2g, $4.60

Open-pollinated SMALL-FRUITED TOMATOES

300-750 seeds/g.



4106HD Honeydrop ECO (62 days) Rampant Ind. From a selection of F-1 Sunsugar, Rachel and Tevis Robertson-Goldberg of Crabapple Farm in Chesterfield, MA, developed Honeydrop and sent us the original seed, with their blessing to keep the production going. Honeydrop's sweet juicy fruity **honey-colored** treats taste almost like white grapes. They are much less prone to cracking in wet weather than **4250** (p. 72) Sun Gold. Seeking to add another light-colored **cherry** to our selection, we trialed it against Blondkopchen, Dr. Carolyn, Isis Candy, Lemondrop and Weissbehart. It bested them all by such a wide margin in earliness, sweetness and complexity that we declined to add any of those others. Parthenocarpic. Still retains a percentage of recessive pink off-types; these are also yummy! **BR** ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4108BO Be My Baby OG (65 days) Ind. This productive cherry is the ongoing result of a cross of three famous tomatoes: an heirloom potato-leaf beefsteak and two cherries, one orange and one red. The crossing and selection process for a **red cherry** with regular tomato foliage began in 1997 and is now complete. The grape tomato in its background lends a rich sweet flavor somewhat akin to that of Sweet Baby Girl, which it replaced. Bred by Relentless. ☙2007 **BR** ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00 **E**=10g, $25.00

4031AO Aosta Valley OG (65 days) Ind. From the mountainous region of NW Italy comes a short-season tomato with exceptionally rich flavor. Prolific clusters of 10–12 **small** (1½") shiny **red** tomatoes hold on the vine and can be picked all at once. The five-sided fruits have thick walls and tiny seeds. Our grower continues to select for consistent shape. Excellent fresh, stewed or added to sauce. It placed in the top 3 of our of 25 paste tomatoes in our latest stewed-tomato tasting. Thanks to Ray Carbone of Steuben, ME, for sharing the seed he brought back from his mountain trek. The Aosta region is famous for its Fontina cheese production. And now for its early superbly flavored tomatoes. Blight resistant. ①

A=0.2g, $2.60 **B**=0.4g, $4.50 **C**=1g, $7.00 **D**=2g, $10.00 **E**=10g, $32.00

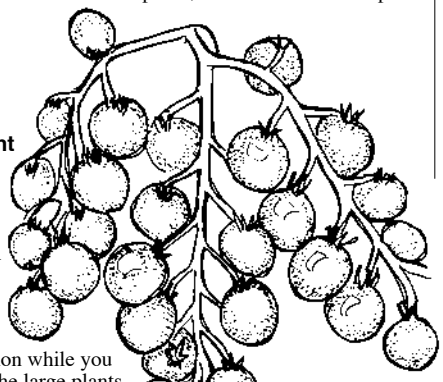
4033CB Copper Beauty (65 days) Ind. This 2" long and 1" wide dark striped **grape-plum** with a pointed tip appears as ornament sprung from a sculptor's imagination, with **light mahogany streaks over a bronze base**. Copper Beauty's stunning deep streaked skin is paired with a dark red interior flesh of sweet flavor oscillating with tartness in a fruity firm texture. The productive plant will give you plenty of opportunity to marvel at its taste and beauty. ② **NEW!**

A=10 seeds, $1.80 **B**=20 seeds, $3.20 **C**=40 seeds, $5.60 **D**=100 seeds, $11.00 **E**=500 seeds, $40.00

BR = Breeder Royalty. We pay royalties to independent breeders. More information on page 106. Complete symbol key on page 5.

4035TS Tropical Sunset (65 days) Ind. The trial gardens tended by Anna Goff in Deer Isle, ME, were often bathed in coastal sunset as we munched and compared cherry tomatoes; that's about as far south as our northern-tier R&D takes us! But the radiant thoughts conjured by this variety name mirror the crazy beach-party color combo of **orange and rosy red** streaks this true mini bicolor sports. Imagine your favorite bicolor beefsteak such as Gold Medal, Pineapple, or Striped German shrunk to a 1 1/4" tender-skinned round **cherry** with fruity sweetness and mild acid balance. At markets, the visual pull of a quart of mixed cherries is inescapable, and the flavor keeps everyone snacking. ② **NEW!**

A=10 seeds, $1.80
B=20 seeds, $3.20
C=40 seeds, $5.60
D=100 seeds, $11.00
E=500 seeds, $40.00



4109GD Gardener's Delight (68 days) Ind. Also known as Sugar Lump, and of German origin, but not an heirloom as we once believed. Introduced by Ernst Benary in 1950-51. A parent of the famous hybrid Sweet 100. Produces the kind of rich sweet deep **red** 1+" **cherries** that you will want to pop into your mouth in profusion while you bask in the garden sunshine. The large plants need staking and will bear till frost. The fruits taste so good that I overlook their annoying tendency to crack. ②

A=0.2g, $1.70 **B**=0.4g, $2.60
C=1g, $4.00 **D**=2g, $5.00
E=10g, $18.00

4111SA Sweet Aperitif (70 days) Ind. These dime-sized red flavor heroes entranced our tasting staff: Roberta said Aperitif was "so sweet, keeps coming as I chew." Carol added, "Wow, they look like jewels and taste amazingly sweet." Nikos guessed the cocktail crowd would like to experiment with them: indeed, the rich juice softly disperses through the mouth carrying a sweet full tomato essence. **Bright red** 7/8" Aperitif is sized like a huge currant or very **small cherry**. This diminutive delight gave twice as vigorous ongoing production and taste wallop as many other standard red cherries in our 2018 trial. ② **NEW!**

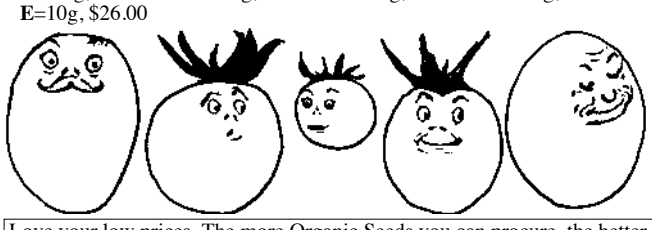
A=10 seeds, $1.80 **B**=20 seeds, $3.00 **C**=40 seeds, $5.00
D=100 seeds, $10.00 **E**=500 seeds, $36.00

4112FB Flaming Burst (70 days) Ind. Tomato breeder Tom Wagner is a true auteur, whose depth of skill and imagination come along maybe once in a lifetime. Millions of gardeners worldwide know his Green Zebra (**4057**, p. 68), but his efforts have developed countless other breathtaking visual and flavor combinations. Flaming Burst is a "small" departure from the streaks and zigs that ornament many of his creations: 1 1/4 x 1" **golden mini pears** cluster on a steadily productive plant. Meaty but not dense, juicy and sweet but tangy not insipid, delivering the correct culinary combination that so many yellow cherries and pears lack. With Flaming Burst, Wagner shows again his mastery of color and shape, also his talent for nuance. ② **NEW!**

A=10 seeds, $1.80 **B**=20 seeds, $3.00 **C**=40 seeds, $5.00
D=100 seeds, $10.00 **E**=500 seeds, $36.00

4113PS Pocket Star ECO (74 days) Ind. A few years ago after giving one of my Grow-for-Fedco talks at Common Ground Fair, a young farmer newly transplanted to the area took away one of the grower applications. The next year he showed up at the Fair with some fruit in his pocket: an attractive **green cherry** tomato with little flecks of gold around its crown that we took back to the warehouse taste kitchen to start the work week. It's rare when our tasters all agree but this was just such a rarity: "nice acidity with a sweet balance that moves into complex full tomato flavor. Meaty. Yum." We were instant fans. He says it showed up amongst a crop of not-green tomatoes, has come true-to-type and produces an abundance of 1" round fruits. He named it for the sci-fi novel *Stars In My Pocket Like Grains of Sand*. We think this stellar cherry tomato is sure to please. Distinguishing ripe green fruit is easy: fruit begins to show a slight golden yellow at the base when ready for harvest. The grower is selecting for more ease of snapping the stem in harvesting. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00 **D**=2g, $8.00
E=10g, $26.00



Love your low prices. The more Organic Seeds you can procure, the better.
– Gaylene Seibold, Springfield, MO

4051JO Jaune de Flammé OG (75 days) Ind. This beloved **orange** flame-colored French heirloom is a significant improvement on old Ida Gold. In 2013 it was quick enough to be the only tomato to produce before the late blight epidemic struck one Brattleboro Farmers' Market grower. She is also well pleased with their productivity, flavor and disease resistance and has been selling them by name for the past five years. In my passive-solar greenhouse I don't start tomatoes till early April, so these usually ripen in the first week of September. One, dead ripe on Sept. 4, was my best-tasting tomato of 2016, richly complex, juicy and satisfying with a slight acidic overtone. Though I am a very tough grader, it won a rare 4 out of a possible 5 taste-rating from me. The **2 oz round** fruits provide just the kind of fresh snacking I love in the field when I get tired and thirsty. They are also great for salads and sauces. This old variety is my new flame in this class of tomatoes. ③

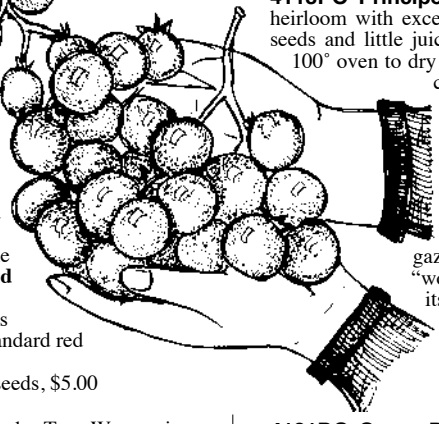
A=0.2g, $1.90

4115BO Black Cherry OG (75 days) Ind. **Two-bite cherries** (avg 1/2–1 oz) with the dusky color and complex flavor typical of the best **black** tomatoes, juicy and delicious. Somewhat late for a cherry tomato, fruit ripens slowly and individually until frost, but worth the wait. Examine each plant closely at picking time: the dark-hued cherries are easy to lose in the foliage. Best flavor if left to ripen on the vine till nice and dark. Seems to tolerate the usual tomato diseases but fruits will crack readily in rainy weather. Combine with **4250** (next page) Sun Gold and any bright red cherry for a lovely display. Brix 7. Developed by Vince Sapp of Tomato Growers Supply and released 2003. ②

A=0.2g, $1.80 **B**=0.4g, $2.90 **C**=1g, $4.50 **D**=2g, $7.00
E=10g, $18.00

4118PO Principe Borghese OG (75 days) Vigorous Det. An Italian heirloom with excellent flavor. Used for sun-dried tomatoes as it has few seeds and little juice. In our humid climate, we require a solar dryer or a 100° oven to dry the fruits successfully. Bears **small red** fruits in prolific clusters over a long season. CSA grower Jill Agnew lauds them for holding their perfect shape so well without cracking. ①

A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00
D=2g, $8.00 **E**=10g, $25.00



4119VO Peacevine OG (78 days) Rampant Ind. Selected by Peace Seeds from Sweet 100 **cherry** tomato and almost identical in fruit size and growth habit. Bears gazillions of sweet clusters each with 8 or so 1" **red** fruits of "wonderful sweet/tart rich flavor." Has the currant tomato in its ancestry. Very high in vitamin C and GABA, a sedating neurotransmitter. That may be why Alan Kapuler named it Peacevine. BR ①

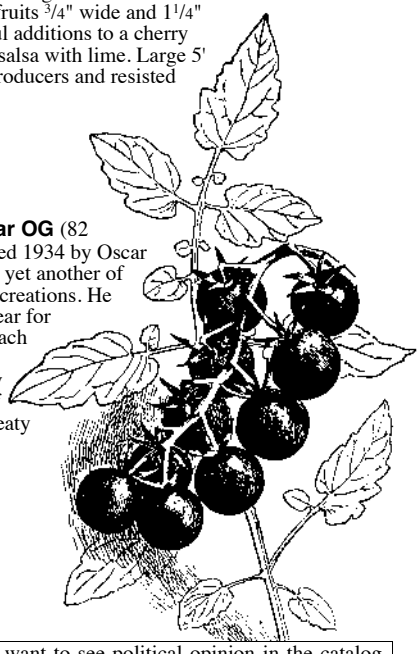
A=0.2g, $1.90 **B**=0.4g, $3.00 **C**=1g, $5.00
D=2g, $8.00 **E**=10g, $25.00

4121DO Green Doctors Frosted OG (81 days) Ind. Low acid, sweet and delicious, and much better than Green Grape in our trials. There are two strains of Doctors; this frosted one is the sweeter of the two. Fruits **green with a silver frost**, blush gold when ripe. Named in honor of the two doctors, Amy Goldman and Carolyn Male, who have written influential books on tomato varieties. Goldman discovered Green Doctors as a **cherry** sport of Dr. Carolyn in her 2002 garden and turned us on to it in her book *The Heirloom Tomato*. Oval fruits 3/4" wide and 1 1/4" long average 11.2g, wonderful additions to a cherry tomato mix. Great in a green salsa with lime. Large 5' rambling plants are prolific producers and resisted EB all season. ①

A=0.2g, $1.60
B=0.4g, $2.80
C=1g, $4.40
D=2g, $7.50
E=10g, $25.00

4122FO Fargo Yellow Pear OG (82 days) Vigorous Det. Introduced 1934 by Oscar Will & Co. of Bismarck, ND, yet another of famous breeder AF Yaeger's creations. He crossed Bison with Yellow Pear for earliness and higher yields. Each plant produces about three dozen sweet tasty 1 oz **yellow** fruits. About twice the size of regular **pear** tomatoes, the meaty morsels are crack resistant. ①

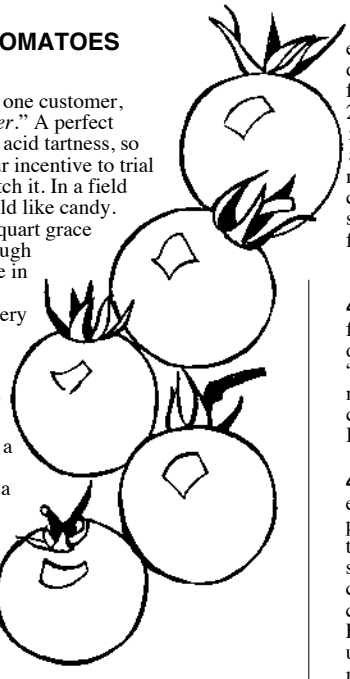
A=0.2g, $1.60
B=0.4g, $2.80
C=1g, $4.40
D=2g, $7.50
E=10g, $22.00



I saw that someone didn't want to see political opinion in the catalog. Phooey on that—keep it up please.
– Steven Haendler, Lee, NH

Hybrid SMALL-FRUITED TOMATOES

350-600 seeds/g.



4250SG Sun Gold (57 days) Ind. To quote one customer, "Without these little babies, there's *no summer*." A perfect combination of deep sweetness with a hint of acid tartness, so good that for almost a decade it took away our incentive to trial **cherry** tomatoes because no others could match it. In a field replete with choices, we are drawn to Sun Gold like candy. What *is* its elusive alluring tang? Quart after quart grace the table, yet we rarely reach surfeit July through September. Small fruits averaging 8.2g, borne in prolific clusters, ripen very early to a rich **apricot** color and keep producing till frost. Very prone to split so pick early when rains are forecast. Brix 8. Resists F1, TMV. ⑤

A=20 seeds, $2.30 **B**=40 seeds, $4.00
C=100 seeds, $9.00 **D**=500 seeds, $32.00
E=1,000 seeds, $60.00

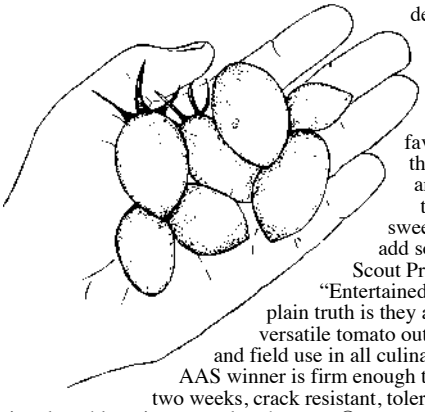
4252SO Esterina OG (60 days) Ind. Since a full medley of colors is so important now in market displays, we think there is a niche for a true bright **yellow cherry**. Among its many attributes, Esterina is large for a cherry, productive over a long period, disease resistant, crack-free and borne on large clusters. Though the flavor will never displace Sun Gold or Sweet Treats from my top five, it rates a solid good: a clean juicy sweetness that may bring you back for more. For a true yellow (golden or orange ones not allowed), that's no small compliment! Resists V and TMV. ③

A=10 seeds, $3.50 **B**=20 seeds, $6.50 **C**=40 seeds, $12.00
D=100 seeds, $22.00 **E**=500 seeds, $52.00

4253JO Jasper OG (60 days) Ind. Just what you think of when you think **cherry** tomatoes—deep **red** globes on small clusters. The small one-bite round fruits average 7.2g and deliver a pleasing instant juicy sweetness. "A real winner at my farmers market—great taste, no disease and very little cracking. We had repeat customers requesting these little gems," says Chris Radtke of Murdock, KS. Though sitting in the epicenter of my LB infestation in 2014, these vigorous vines defied it and cranked out pint after pint of perfect delectable fruits that held quality a long time in the field. Very early, very prolific, very disease resistant. No wonder they won an AAS award in 2013 for Johnny's. I was harvesting them in a cold summer by mid-August even though I did not start my seedlings till April 8. They will always be my cherry tomato insurance policy. ③

A=10 seeds, $3.80

4264JT Juliet (60 days) Ind. There will be no lack of Romeos who want to nibble on these and no lack of the delectable little plum-shaped fruits for them to adore. They come in clusters everywhere, each truss bearing 6–8 of the 1–2 oz **grapes** for an astonishing total of 50–80 glossy **red** fruits per plant. With an engaging sweetness, they make good stewing tomatoes, excellent salad tomatoes, and, despite their juiciness, a tangy sauce with a diverse complex richness and full sweet tomato flavor. Lynn Sagalyn of Philadelphia reports that "Juliet is my favorite tomato for drying. Cut them in half, flip out the seeds and dehydrate…They are like tomato 'raisins'—chewy and sweet to just eat, put on pizza, or add some red to a winter stir-fry." Scout Proft of East Dorset, VT, says, "Entertained by your description, but the plain truth is they are *the* highest yielding most versatile tomato out there—both for greenhouse and field use in all culinary ways. Period." This 1999 AAS winner is firm enough to hold on the vines for up to two weeks, crack resistant, tolerant to EB and LB, and fairly invulnerable to insect or slug damage. ③



A=20 seeds, $3.00 **B**=40 seeds, $5.00 **C**=100 seeds, $6.00
D=500 seeds, $24.00 **E**=1,000 seeds, $42.00

4266HB Honey Bunch (62 days) Ind. I've never been fond of **grape** tomatoes, but I'll make an exception for this honey bunch. No complexity here, just a luscious over-the-top sweetness with a honeyed nuance that could be habit-forming. For maximum enjoyment, wait until they ripen fully to a bright **red** in the field. That's easy because they are very crack-resistant and seem to hold field quality forever. Our trialers loved the texture of these bright red 8–14g 1x1½" fruits, the size of cherries, but the shape of grapes. "Like small Juliets." Brix 9. High-yielding vigorous vines are tolerate EB. ③

A=20 seeds, $3.50 **B**=40 seeds, $6.00 **C**=100 seeds, $12.00
D=500 seeds, $50.00 **E**=1,000 seeds, $96.00

4265CO Cherry Bomb OG (64 days) Ind. Spray-wary gardeners everywhere can celebrate! Johnny's Selected Seeds breeder Emily Haga developed this vigorous hybrid **cherry** tomato not only with explosive flavor, but also added bomb-proof resistance against late blight lineage US 23. The glossy bright **crimson** cherry/grape cross bursts with full tomato zing balanced against a meaty firm texture. Fedco staffers Roberta Bailey and Heron Breen swear by Cherry Bomb for superb eating and reliable non-stop production, making sure we gave it a well-deserved place in our catalog. Growers take note: the oval slightly heart shape and distinct long sepals will give unique visual appeal at the farmers' market. Between the flavor and the look, everyone will want more! LB resistant. ③ **NEW!**

A=10 seeds, $6.00 **B**=20 seeds, $8.00 **C**=40 seeds, $15.00
D=100 seeds, $30.00 **E**=500 seeds, $140.00

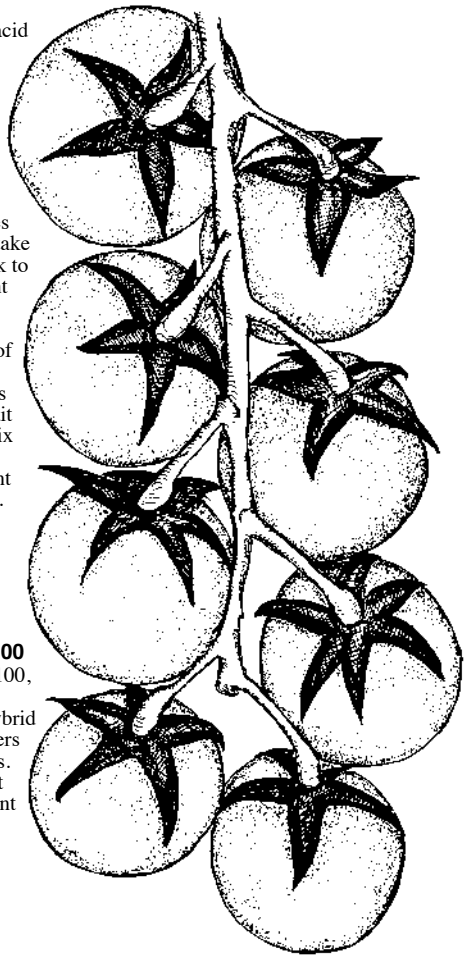
4271LU Lucia (64 days) Ind. Everyone in our taste test kept coming back for more of these super-crunchy **red grapes**. The consensus: these diminutive 5–8g sweet fruits can boast some tartness and complexity. They "taste like a red Sun Gold." Unlike Sun Gold, they have some crack resistance, vulnerable only in cold wet weather. Starting very early, Lucia cranks out tons of bright red fruits great in salads, on pizzas or in sauces. Brix 7.5. ③

A=0.1g, $6.00 **B**=0.2g, $11.00 **C**=0.4g, $20.00 **D**=1g, $48.00

4225MM Mountain Magic (69 days) Compact Ind. NC State University's emeritus professor Randy Gardner would be at the top of any list of elite plant breeders. Gardner, who "retired" in 2008 after 32 years, is still adding to his impressive oeuvre of 22 superb tomato varieties, most bearing his signature prefix 'Mountain.' He was among the first to take up the heirloom challenge to breed flavor into his hybrids, and he is among the first to combat LB. Mountain Magic, with grape tomato in its parentage, does both. Even in my unstaked unpruned overcrowded tomato jungles, his unblemished round crack-free **two-bite red** fruits stand long. Almost all are marketable, growing in clusters of 7 or 8, 10–11 to the pound. As for production: rousing. During a 15-day period beginning Aug. 31, 2012, I harvested 106 fruits—all but three perfect—from a single plant. Juicy with a rich sprightly flavor that greatly pleased and refreshed me. Sums Bryan O'Hara, "Holy winner! Great vigor and disease resistance, high yields, great sweet flavor…you've got a *great* one." Seed sold by count. Resists LB, V, F1-3 with tolerance to EB. ~480 seeds/g. ④

A=10 seeds, $4.00 **B**=20 seeds, $7.60 **C**=40 seeds, $14.00
D=100 seeds, $28.00 **E**=500 seeds, $120.00

4254ST Sweet Treats (75 days) Ind. Unusual among **cherry** tomatoes for its phenomenal flavor and incomparable gorgeous **deep ruby** color with matte finish at peak ripeness. Roberta said, "These are as close in taste to a full-size tomato as I've ever eaten, with a complexity and balance of sweetness and flavor, low acid and mellow. My vote is a resounding yes at any price." Royalston, MA, market grower Larry Siegel's endorsement was more restrained: "Large indeed. Plentiful indeed. Handy for bulking up my containers of mixed cherries for market. But seemed to take forever to change from pink to deep rose and while tolerant to cracking they are not resistant." Large fruits (20–30g) come in clusters of 12–15 per truss. Perfect for salads and snacking. Ripens from pink to deep rose. Wait for full color to harvest. Brix 8–9. Resistant to TMV0,1, F1,2 and leaf mold. Tolerant to GLS, crown and root rot. ~400 seeds/g. ⑤

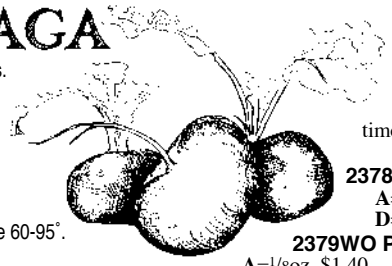


A=10 seeds, $5.00
B=20 seeds, $8.00
C=40 seeds, $15.00
D=100 seeds, $34.00
E=500 seeds, $140.00

4256SW Super Sweet 100 (78 days) Ind. Like Sweet 100, but with more disease resistance. Very popular hybrid **cherry** tomato ripens clusters of 1" round sweet **red** fruits. Should be staked. Will split in rainy conditions. Resistant to V and F1. ⑥

A=0.1g, $4.00
B=0.2g, $7.50
C=1g, $24.00
D=2g, $42.00
E=4g, $80.00

TURNIP & RUTABAGA



~6,000-12,000 seeds/oz. All open-pollinated except 2377 Oasis.
Culture: Hardy. Thinning is critical for full-sized roots. Turnips have a shorter growing season and are not as cold-hardy or as good keepers as rutabagas. Turnips are best picked before they get large and fibrous. Rutabagas, also known as Swedes or Swedish turnips, form enlarged roots above ground with a finely branched system below.

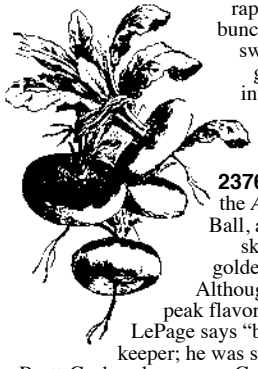
Minimum germination temperature for turnips 40˚, optimal range 60-95˚.

Disease: DM Downy Mildew

Note: Because of quarantine, cannot ship rutabagas and turnips in packages larger than one half oz. to the Willamette Valley except those that have tested negative for Black Leg and Black Rot. Our information at press time is in the description here; please check our website for updates.

Days to maturity are from date of seeding.

2372WE White Egg Turnip (45 days) *Brassica rapa* A staple of seed catalogs throughout most of the 19th century. Henderson in 1902 praised its perfectly smooth skin and snowy white flesh. Roots are egg-shaped, grow rapidly half out of the ground, ideal for early market bunching before they attain full size. The flesh is very sweet, so mild they can be eaten raw fresh from the garden, also good for pickling. Keeps well; flavor intensifies in storage. ②



A=1/8oz, $1.30 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $6.00 **E**=1lb, $10.00 **K**=5lb, $45.00

2376GB Gold Ball Turnip (45 days) *B. r.* Listed in the *Album Vilmorin* (1854-55) as Robertson's Golden Ball, also known as Orange Jelly. Not truly orange, the skin is very smooth and yellow and the soft flesh is golden-yellow. Rather broad leaves of medium height. Although the globes reach 4–5" at full size, they achieve peak flavor and maximum sweetness at 3" in diameter. Alan LePage says "better than rutabagas or any other turnip." A good keeper; he was selling them into March. Maryland market grower Brett Grohsgal concurs, Gold Ball "comes into its own after the frosts and freezes have begun…remains mild and nutty [with] a firm, near-perfect texture. Best simmered or roasted. Pleases even those retail customers who don't really like other turnips, and a strong seller with our chefs." ②

A=1/8oz, $1.30 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $6.00 **E**=1lb, $10.00 **K**=5lb, $45.00

2377TR Oasis Turnip (50 days) *B. r.* F-1 hybrid. The closest we've found to the much-sought-after Hakurei turnip, sharing many fine features: smooth round globes, refined pure white color, delicate sweet fruity flavor and crisp tender texture so suitable for salads and light cooking. Our purchaser Nikos Kavanya esteems it highly. Good for fall as well as early summer crops. Best harvested at bunching size, but retains quality for a while. From Takii in Japan. Tolerant to DM. Tested negative for black rot and black leg. ⑤

A=1/16oz, $3.60 **B**=1/4oz, $9.00 **C**=1/2oz, $14.50 **D**=1oz, $23.00 **E**=4oz, $80.00 **K**=1lb, $280.00

Purple Top White Globe Turnip (50 days) *B. r.* Popular variety with purple tops, white bottoms and white flesh can attain 6" in diameter. An heirloom from before 1880. Starks claimed in 1921 that "other varieties are good, but this one stands in a class by itself." Sometimes used to feed livestock, but CR likes them in soups, and Joanna eats them up to golf-ball-sized with the greens.

2378WG Purple Top White Globe ②

A=1/8oz, $1.30 **B**=1/2oz, $2.00 **C**=1oz, $3.00 **D**=4oz, $6.00 **E**=1lb, $10.00 **K**=5lb, $45.00

2379WO Purple Top White Globe OG ③

A=1/8oz, $1.40 **B**=1/2oz, $2.30 **C**=1oz, $3.60 **D**=4oz, $6.50 **E**=1lb, $13.00 **K**=5lb, $58.00

2384RR Red Round Turnip (55 days) *B. r.* Very similar to Scarlet Ohno turnip, Red Round's root is a little rounder, but with the same tennis ball size and bright red skin. Inside flesh is white with a bit of variable rose blushing. Slice them on a crudité platter or use them to make a beautiful magenta kimchi. ⑤

A=1/8oz, $2.00 **B**=1/2oz, $6.00 **C**=1oz, $8.00 **D**=4oz, $24.00 **E**=1lb, $72.00

2392GF Gilfeather Turnip (85 days) *B. napus* x *B. r.* This white-fleshed heirloom has put Wardsboro, VT, (population 900) on the culinary map. Every October, Wardsboro hosts a festival at which Gilfeather is served in all the dishes. Although it has come down in folklore as a turnip, it is really an interspecies cross between a rutabaga and a true turnip, big-knobbed and bulky with small hairy tendrils growing on its light green skin. It was either developed or discovered by John Gilfeather (1865-1944) of Wardsboro in the late 1800s. He sold them by the cartload in Brattleboro, VT, and Northhampton, MA, in the early 1900s. Although Gilfeather is said to have cut the tops and bottoms off his turnips so no one else could propagate them, some seeds escaped to market growers William and Mary Lou Schmidt, who salvaged, multiplied and commercialized them. Sweeter and later to mature than other turnips, not woody even at softball size, and taste better after frost. "Smooth, sweet, silky—we love it mashed with carrots and a small potato," said Susan Lowry of Fryeburg, ME. Amy Burke of York, ME, suggested adding Gilfeather to our season-extending greens list. At the end of January she found them even hardier than Red Russian and Beedy's Camden kales. Listed on Slow Food's Ark of Taste. ①

A=1/16oz, $2.30 **B**=1/4oz, $6.00 **C**=1oz, $13.00 **D**=4oz, $48.00

2398LU Laurentian Rutabaga (95 days) *B. n.* This popular Canadian variety sports a deep purple crown and cream-yellow base. Uniform 5–6" almost neckless roots suitable for winter storage, larger and sweeter than American Purple Top. Pale yellow flesh has refined texture and taste. "The mix of a sweet cabbage flavor with a potato-ish texture," summarizes Anne Elder. ②

A=1/8oz, $1.40 **B**=1/4oz, $2.10 **C**=1oz, $3.20 **D**=4oz, $6.00 **E**=1lb, $14.00 **K**=5lb, $65.00

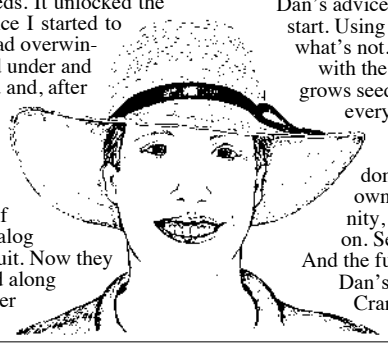
Gleanings from our Seed Growers (part 7)

Daniel Brisbois, of Ferme Coop rative Tourne-Sol in Quebec, grew up between Montreal and Ottawa. "When I was 12, [we] had a really big garden and I, being the eldest, and in particular the eldest son, was expected to work in the yard…weeding, turning soil…and I hated it."

Fast forward several years, through work in social justice, food politics and towards a degree in Agricultural Engineering—"from an environmental perspective"—and Daniel found himself back working the land, this time on a farm, and loving it. "I found I had built up a work ethic and some skills," he said. After managing a farm for a while, he and a handful of like-minded friends decided to farm together as a worker's cooperative. Primarily a CSA farm, it had its first full growing season in 2005. Now one quarter of sales is seed, a couple hundred varieties, 70–100 grown each year on up to an acre.

Daniel is the farm's primary seed grower. He got interested when he apprenticed with a couple who "lived and breathed seeds. It unlocked the idea that growing seeds was possible. As a consequence I started to see that seeds were everywhere. I gathered some that had overwintered in a field or from a rutabaga that had been plowed under and survived. But when the arugula bolted and went to seed and, after a long and laborious process, I got one pound of seed, the cash register went off in my head. Seeds could make money and you could grow all your own seed."

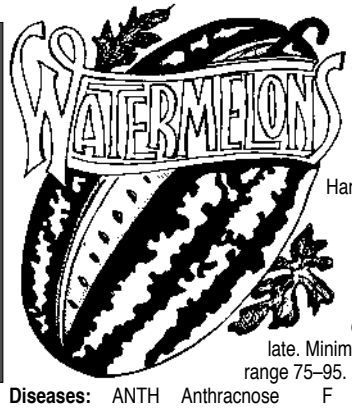
He contracted with a few small Ontario seed companies for seed by measurement—a half cup, a full cup—because he didn't have scales. As his collection of mismatched seeds grew, he put together a one-page catalog with 20–25 varieties and made the Seedy Saturday circuit. Now they sell from their webstore and the workload has increased along with the profitability. Two people help Dan with summer seed work and a few more in winter.



His favorite seed crops: the brassicas, especially *B. rapa*. "They do well. I love the cleaning of it. It's a diverse species, with diverse genetics, easy to cross in and select out. Cleaning is not tedious—2 to 3 steps. And it produces a lot." He said, "I don't like the things that don't work out. Flowers are frustrating. And we struggle with biennials…overwintering and then catching them at the right timing in the spring."

He questions where in the process selection ends and breeding begins. "You pull out 10 to 15 of the best plants (out of 100) for seed and, at a base level, you're looking at disease resistance and suitability to our climate and soil." Then he evaluates shape, size, earliness and yield. With a focus on winter radishes, hot peppers, *Brassica juncea* and *rapa*, it's more intuitive where he's going. "I don't start with an end goal; I start with a question: 'What happens when I do this?' After all, when you begin saving seed there are all these warnings *not* to cross-pollinate. So I have this curiosity and am crossing just to see what I'll get."

Dan's advice: "Just jump in and try stuff and don't do it commercially to start. Using the seed you have saved will show you what's working and what's not. This builds confidence. Start small and build a relationship with the seed. Seed is exciting. It's great to be a market grower who grows seed because so few are doing so. As a seed grower, we control every part of the process; as a market grower we have a different understanding of what is a good variety. It's exciting to be part of a seed movement and keeping seed available. We don't get caught without seed we rely on, and we can grow our own seed of discontinued varieties. Having people in a community, in your locality, that save seed makes sure it continues later on. Seed stewards make sure we have the seed we need later on." And the future of seed looks bright at Ferme Coopérative Tourne-Sol. Dan's daughter, age 6, has been saving her own crop of True Red Cranberry Beans for more than half her life!



Citrullus lanatus

1 gram packet about 20 seeds, sows 7 hills; 1/16 oz packet, packet about 40 seeds, sows 14 hills. 1 oz=about 670 seeds.

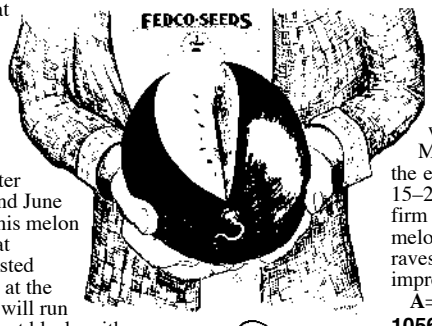
Culture: See the sidebar on page 43. Harvesting watermelon at proper ripeness is an art. Thumping should produce a low, hollow sound. Spread thumb and forefinger and press hard on fruit. If you feel any give, watermelon is ripe. Don't heed the traditional advice to wait for the closest tendril to brown—that may be too late. Minimum germination temperature 60˚, optimal range 75–95.

Diseases: ANTH Anthracnose F Fusarium

Days to maturity are from date of transplanting, not seeding.

RED & PINK FLESH

1003BO Blacktail Mountain OG (71 days) Open-pollinated. At age 17 cucurbit aficionado and future eminent seedsman Glenn Drowns took on his 4-year project to breed a watermelon that would withstand the rigors of his mountainous northern Idaho climate and ripen before first frost despite summer nighttime temperatures that averaged 43˚. No wonder Blacktail Mountain is the earliest variety extant, among the hardiest, best adapted to a variety of conditions, and even stores after harvest as long as any. Adam Tomash and June Zellers deserve credit for popularizing this melon by sharing tastes at the Exhibition Hall at Common Ground Fair. They have harvested "delicious" 17 and 19 lb melons. This is at the upper end of Blacktail's potential; most will run from 8–12 lb. Fruits are dark green, almost black, with faint stripes, **flesh orange-red** like a Sugar Baby only with a cleaner more pleasing texture, very sweet, juicy and crunchy. Drowns didn't rest on his laurels—he now maintains Sand Hill Preservation Center in Iowa, his catalog a treasure trove of rare seed and poultry varieties. BR ②



A=1/16oz, $2.80 **B**=1/4oz, $8.00 **C**=1/2oz, $14.00 **D**=2oz, $29.00

1016DN Diana (76 days) F-1 hybrid. Our 2013 summer hunt for yellow-skinned luster and excellent quality showed Diana supreme. She easily bested past-favorite Golden Crown, AAS winner Faerie and open-pollinated Golden Midget, her 10.3 Brix reading dwarfing Midget's anemic 7.4. Her 2.2 lb oval melons look as if their light skins were painted with bright yellow stripes. Her crunchy texture, sweetness and complex flavor, unmarred by the small sparse seeds, won over our warehouse staff. Showed good productivity of 6 fruits from two hills in a poor melon year. "A hit, lovely golden rinds and very sweet **bright red flesh**," sums Ohio's Janine Welsby. Sold by seed count. ③

A=15 seeds, $4.00 **B**=60 seeds, $12.00 **C**=180 seeds, $30.00

1028SO Sugar Baby OG (80 days) Open-pollinated. The first of its genre and still the standard northern icebox watermelon. Among the earliest in its class, Sugar Baby grows 8–10 lb fruits, dark green outside and **deep red** inside. Discovered in a field of picnic watermelons by M. Hardin of Geary, OK, in 1955 and introduced by the Woodside Seed Co. Still prized by those who prefer their watermelons open-pollinated and of modest size, although its flesh quality is grainier than the pricey supermarket mini-melons. ③

A=1/16oz, $2.00 **B**=1/4oz, $4.00 **C**=1oz, $7.00 **D**=1lb, $70.00

1035DO Sweet Dakota Rose OG (82 days) Open-pollinated. When David Nonnenmacher of Hawley, PA, claimed his absolute beauties started at 15 lb and topped off at 26 and 28, he would perhaps forgive our skepticism. You couldn't grow those in Maine, we thought, until Erica Rudloff of Exeter proved us wrong by exhibiting her magnificent 19 lb specimen at the 2015 Common Ground Fair. Nonnenmacher clarified that he had mere 15-pounders in 2017's cool summer but praised their production and sweetness despite the weather. Bred by David Podoll of North Dakota to be intermediate between its parents, small early maturing Early Canada and enormous late-maturing Black Diamond, its skin light green with dark green stripes and its **flesh red**. A star in CR's trials, maturing early and producing 8–12 lb fruits, 2–3 per plant. It has few seeds and stores longer than most others. Nonnenmacher reported its outstanding juiciness and flavor "drew raves from chefs and many fellow PASA members. I think I have them convinced that modern seedless watermelons not only leave out the seeds but also the flavor." We have no difficulty believing that. Ω ①

A=1/16oz, $2.50 **B**=1/4oz, $7.50 **C**=1oz, $20.00

1042QZ Quetzali (85 days) Open-pollinated. Sweet (tested 9.7% sugars at WSU trials) with some substance. Ripens 9–12 lb fruits with dark green skin splotched with lime-green sponge prints. Even more attractive on the inside where the dense **pink flesh** is almost seedless! *Caution: Requires a sharp knife, strong wrist and sure stroke to cut open its skin*. Resists ANTH1. We cannot ship to South Carolina. **PVP**. ⑥

A=1/16oz, $2.30 **B**=1/4oz, $6.00 **C**=1oz, $16.00

Sunsweet (85 days) Open-pollinated. We hope to continue listing this adaptable sweet red-fleshed watermelon, but do not presently have sufficient stock seed to multiply it. If you have a surplus of Sunsweet seed that you would be willing to sell back to Fedco so we can grow our own seed production, contact questions@fedcoseeds.com.

1045FA Fantasy (85 days) F-1 hybrid. Northern growers have probably noticed our italicized cautions saying "maybe not really for you" on whopper striped oblong watermelon varieties. In our own gardens, we never skimp on the tricks of planting good seedlings into black plastic under row cover, yet getting yields of 1 or 2 fully ripe biggies per plant amounts to a good year. Big news: if our 2018 Zone 4 watermelon trials have any merit, now is your chance to live the watermelon dream. With extra-sweet **deep red flesh** and raging watermelon flavor, Fantasy made four times the fruit of production-standard Sangria, and was earlier. In hot dry 2018, the 7x15" fruits weighed 15 lbs; a little more rain and we could've pushed 20+ lbs easy. Its vigor and yields prove it was bred for organic growing conditions. Fantasy makes saying goodbye to recently dropped Sweet Favorite effortless. But here's the italic warning: *Northern growers could get used to this new watermelon reality*. ⑤ **NEW!**

A=15 seeds, $3.20 **B**=60 seeds, $9.00 **C**=180 seeds, $23.00

1047VR Verona ECO (86 days) We found this rare large red oblong watermelon through Seeds of Change. Verona was introduced in 1965 in Mississippi. One of its parents is the famous Charleston Gray. Considered the earliest and best-tasting of the Black Diamond types, Verona pumps out 15–20 lb fruits with thin but tough smooth dark green skins and attractive firm **red flesh**. Sweet and tasty, the best-flavored open-pollinated watermelon I've ever eaten, Verona had high yields in the OSU trials and got raves at the staff taste test. Well adapted to cool climates, has produced impressively even as far north as Starks, ME. Tolerant to ANTH, F. ①

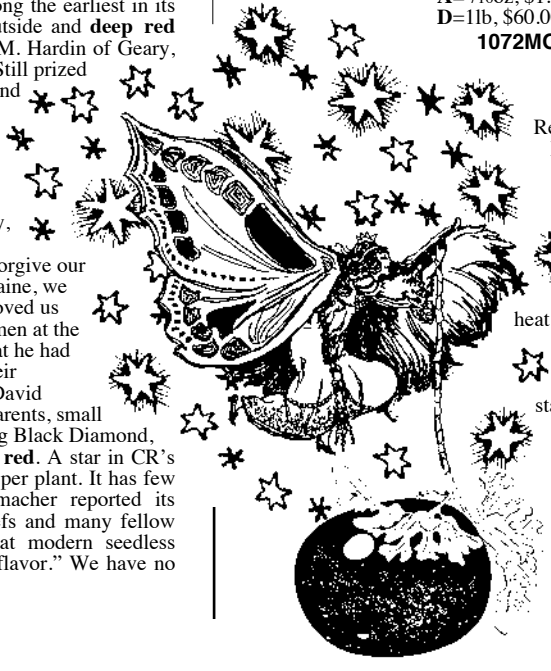
A=1/16oz, $2.20 **B**=1/4oz, $6.00 **C**=1oz, $15.00

1056SG Sangria (88 days) F-1 hybrid. The sweetest (as much as 12–14% sugars in some tests) juiciest watermelon in our trials. These elongated ovals average 10–12 lb with dark green skin broken by light green stripes. Bright refined **red flesh** will satisfy the most avid sugar seekers. Sangria, the first hybrid Allsweet type ever developed, has been a big hit on the market. Cannot ship to South Carolina. Tolerant to some races of ANTH and F. *May not ripen in areas with insufficient heat*. ⑥

A=15 seeds, $2.80 **B**=60 seeds, $8.00 **C**=180 seeds, $21.00

1063CO Crimson Sweet OG (90 days) Open-pollinated. The deeply satisfying taste of its very sweet crisp **dark red flesh** brought CR's 2014 CGCF Exhibition Hall talk to a fitting conclusion. Thank you, Rachel Katz. This almost-round 10x12" light green melon with bold dark green stripes has defined good watermelon eating since 1964 when it was developed by Dr. C.V. Hall of Kansas State U. Tolerance to ANTH1,3 and F1,2 and a thick skin suitable for shipping make it a commercial favorite in the Middle Atlantic states and the Southeast. 9.9 Brix at WSU trials. Vigorous vines. Pam Dawling who grows seed for it says 22 melons yield 1 lb of seed. 1978 AAS winner. *Recommended only for growers in climates warm enough to grow a 25 lb watermelon*. ③

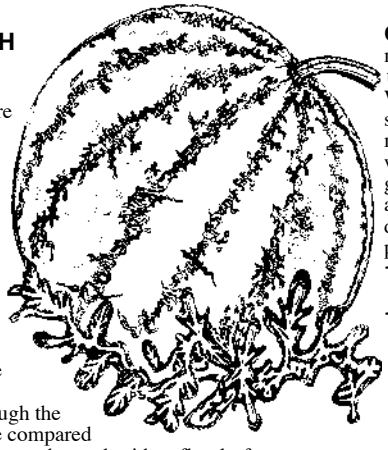
A=1/16oz, $1.90 **B**=1/4oz, $4.50 **C**=1oz, $6.00 **D**=1lb, $60.00



1072MO Moon and Stars OG (100 days) Open-pollinated. Once feared extinct, this now-famous watermelon became a cause célèbre for the Seed Savers Exchange. Released by Peter Henderson & Co. as Sun, Moon and Stars in 1926, it was popular in the '30s before fading into obscurity for almost fifty years. Seed Savers Exchange co-founder Kent Whealy found it again in 1981 after a four-year search and his son Aaron supplied us with our original seed when he was just 12 years old. Because it needs a lot of heat to set fruit, it poses a challenge worthy of the Maine melon-grower's mettle. Dark green skin has beautiful yellow spots which range in size from little peas (the stars) to a silver dollar or larger (the moon). Sweet (9.7 Brix) somewhat grainy **pink flesh**, and such a looker! Spotted foliage, actually a product of a virus found in the breeding lines, looks unhealthy to the uninitiated. ②

A=1/16oz, $2.00 **B**=1/4oz, $5.80 **C**=1oz, $16.00

YELLOW & ORANGE FLESH



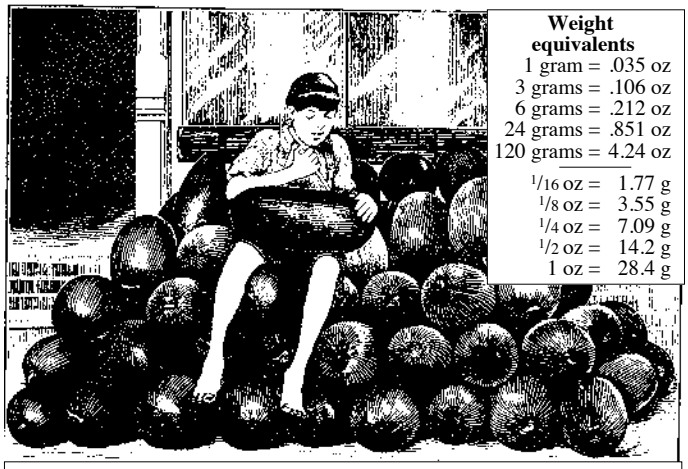
1007PY Petite Yellow (75 days) F-1 hybrid. Light green watermelon with narrow dark green stripes and a little more than half the size of Peace, these 4–5 lb **yellow-fleshed** cuties make perfect one-meal melons, sweet, juicy, with flavor and texture to please and very few seeds to interfere. Tough skin that resists cracking and permits long-distance shipping. ③
A=1/16oz, $5.00 **B**=1/4oz, $18.00 **C**=1oz, $64.00

1009PC Peace (75 days) F-1 hybrid. At the end of CR's Common Ground Exhibition Hall table talk one Sunday we tasted Peace alongside the old standard Seminis-Monsanto's Yellow Doll. Although the informal vote afterwards was split, Peace compared favorably in flavor, texture and sweetness enhanced with a floral aftertone that added some complexity. Its **yellow flesh** has that kind of drizzle-down-your chin juiciness that thoroughly satisfies on a hot late-summer day. Good production of 8 lb avg fruits adorned with light green skin punctuated with narrow dark green stripes. ③
A=1/16oz, $5.00 **B**=1/4oz, $16.00 **C**=1oz, $56.00

1013GF Gold Flower (75 days) F-1 hybrid. "These are my 5-star melons," says Jason Kafka. "The best watermelon *ever* in terms of reliable production and flavor," seconds John Eisenstein of Port Royal, PA. Caroline Brown's "all time favorite watermelon" at her Stafford Springs, CT, Down to Earth CSA. In a taste test CR loved their complex sweet butterscotchy flavor that rated a 10.4 Brix at WSU. In 2010 Heron picked his first ripe fruit on Aug. 6, a dozen days earlier than 2009. From mainland China, these 7x14" torpedo-shaped melons carry a payload of rich sweet flavor as their interior **flesh** ripens from yellow to **orange**. Thin dark green skins with black snakeskin markings resemble a dwarfed Giant Rattlesnake melon. Sets 4–6 fruits per plant, best picked before the tendrils totally wither, stored in a cool room for 24 hours before marketing, or 36–48 hours before eating. So early and productive, could benefit from a second planting. ③
A=1/16oz, $4.00 **B**=1/4oz, $12.00 **C**=1oz, $36.00

1021MO Early Moonbeam OG (78 days) Open-pollinated stabilized selection from Yellow Doll, one of breeder Alan Kapuler's notable successes in de-hybridizing hybrids. Kapuler retained most of Doll's strengths including earliness, icebox size (5–8 lb), sweet **yellow flesh** and colorful skin of dark green stripes on a greenish-white background, while sacrificing only a scintilla of uniformity and flavor. Brix reading of 9.9 at WSU trials. **BR** ①
A=1/16oz, $2.40 **B**=1/4oz, $6.00 **C**=1oz, $20.00

1024OR Orange Orchid (78 days) F-1 hybrid. For a smaller more-marketable alternative to **1066-67** Orangeglo, grow Orchid. Orchid provides reliable early production of refined 6–8 lb oblong fruits with **bright orange flesh**, crisp texture and super sweet floral flavor and not a hint of the hollow heart that can plague orange-fleshed watermelons. Medium light green rind with dark green striping. Ripened Aug. 29, 2013, for Heron from a late June 12 transplanting. CR's, started later in 2014, ripened mid-September, checking in at 8.25 lb, the best he had grown in eight years in Colrain's in watermelon-averse sandy loam. ③
A=1/16oz, $4.00 **B**=1/4oz, $12.00 **C**=1oz, $36.00



Weight equivalents

1 gram =	.035 oz
3 grams =	.106 oz
6 grams =	.212 oz
24 grams =	.851 oz
120 grams =	4.24 oz
1/16 oz =	1.77 g
1/8 oz =	3.55 g
1/4 oz =	7.09 g
1/2 oz =	14.2 g
1 oz =	28.4 g

Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

Orangeglo (90 days) Open-pollinated. The most orange of watermelons, much favored by Glenn Drowns. Like us, Drowns enjoys convincing people to try new things. Orangeglo was one of his big triumphs at farmers market. When he took them for the first time, some folks even refused his free samples. The next week people were waiting in line. Not the sweetest of our melons, however its crisp tender **bright orange flesh** is juicy and refreshing with an almost tropical flavor. Adapted to the Northeast and every bit as good as Drowns promised, the striped oblong melons average 10 and often achieve 15 lb. Let them stay in the field an extra few days when the stem is drying because they reach full sweetness only when completely ripe. Large, plentiful seeds. WSU Brix rating of 10.7.

1066GL Orangeglo ECO ①
A=1/16oz, $2.50 **B**=1/4oz, $7.00 **C**=1oz, $18.00

1067GO Orangeglo OG ①
A=1/16oz, $2.60 **B**=1/4oz, $7.50 **C**=1oz, $20.00

Thank you thank you as always for helping make our gardens and world more beautiful, delicious, diverse, and peaceful.
– Zoe Tenney, Sedgwick, ME

Zucchini: see pg 60.

A Bit of Fedco History

CR Lawn started the Fedco Seed Order as a special project of the **Fed**eration of **Co**ops because he used to get bored in February. In 1979 he invited the many area buying clubs in the Federation to collate their members' seed orders and fill out a grid order form. There was no catalog.

In the '80s, we lined up hundreds of boxes and hung each customer's grid form on a box. Then we distributed one variety of seed after another and put each into the boxes as specified on the order form. Beans came first so they were distributed into the boxes first, thus heaviest on the bottom. And, going down the list, even if a box was full, we could always fit a few packets of tomatoes, herbs, or flowers into it.

With orders numbering in the thousands, the distribution method became obsolete, but we still used the grid order form and its handy unit pricing. Pricing was another reason, for example, all the brassicas went together. Some sections were divided in two: OP Melons and Hybrid Melons initially were divided for price considerations, though it didn't take long to figure out other good reasons to specify these important categories. How vegetables are planted was another consideration: all the items that need an early start were grouped together. As more individuals and fewer groups ordered we phased out the grid. It last appeared in 2000.

We made our first catalog in 1989. It had a cover photo of a cornucopia of seed packets and one picture of a thistle inside. We like to think the catalog has been getting better ever since.

VEGETABLE PLANTING GUIDE

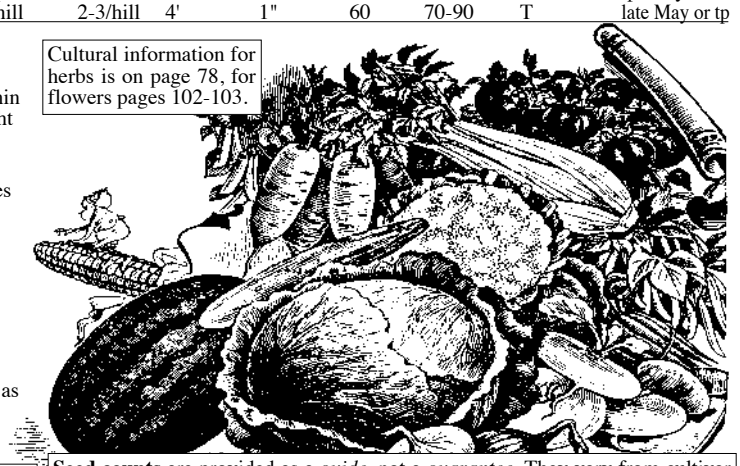
Vegetable	Page # range	avg. sds/oz	sds/100'	Pkt plants	distance apart	thin to	row spacing	seed depth	min soil temp °F	ideal soil temp	hardiness	planting dates
Artichoke	4	560	T	10 pl	3'	No	2'	1/2"	60	65-85	MH	tp late
Arugula	27	15000	3g	60'	1"	4"	18"	1/4"	50	65-85	MH	May 1/Aug 1
Asian Greens, assorted	31	5000-15000	varies					1/4"	50	65-85	MH	early May
Basil	79-80	17000	5g	10-80'	1/2"	4"	18"	1/4"	65	70-85	VT	June 1
Bean, Bush, Dry	4-7	90	8 oz	25'	3-4"	No	2-3'	1"	60	60-80	T	late May
Bean, Fava	9	17	1#	12'	3-4"	No	2-3'	1"	40	40-75	H	ASAP
Bean, Lima	9	60	1#	40-60'	4-6"	No	3'	1"	60	70-85	VT	late May
Bean, Pole	7-8	65	6 oz	10 pl/oz	6/pole	3/pole	3-4'	1"	60	60-80	T	late May
Bean, Soy	9	80	5 oz	10'	3"	No	3'	1"	60	70-90	T	June 1
Beet	10-11	2200	5/8 oz	20'	1"	2-4"	12-18"	1/2"	40	60-85	H	Apr-July
Broccoli	11-12	5000-8000	5g	.5g=10'	1"	24-30"	30"	1/4"	50	65-85	MH	tp May/June
Brussels Sprouts	13	5000	5g	.5g=10'	1"	24-30"	24-30"	1/4"	50	65-85	H	tp May/June
Cabbage	13-14	6000-7000	5g	.5g=10'	1"	24-30"	24-30"	1/4"	40	55-95	MH	tp May/June
Carrot	15-16	18000	10g	1/8oz=35'	1/4"-1/2"	1"	16-24"	1/2"	40	60-85	H	Apr-July
Cauliflower	17	6000-7000	4g	.5g=12'	1"	30"	30-36"	1/4"	40	55-80	MH	tp May/June
Celery/Celeriac	18	75000	T	500	8"	No	2-3'	1/8"	40	59-70*	T	tp June 1
Chard	28	800-2000	1 1/2 oz	5-13'	1"	3-6"	18-24"	1/2"	40	50-85	H	ASAP
Chicory	28	16000	T	300 pl	1'	No	2'	1/8"	50	60-85	H	tp late June
Chinese Cabbage	32	9500	1/4 oz	25'	1/2"	12-18"	24-30"	1/4"	50	70-95	MH	late May or tp
Corn, OP	19-21	100	4 oz	50'	3"	1'	3'	1"	50	60-95	T	late May
Corn, hybrid	19-21	155	4 oz	50'	3"	1'	3'	1"	50	60-95	T	late May
Cress	29	9000	3g	50-70'	1/2"	1-2"	18"	1/4"	50	65-85	MH	May 1
Cucumber	22-23	1000	1/2 oz	11'	2"	4"	3-4'	1/2"	60	65-95	VT	June 1 or tp
Eggplant	24	7000	T	40 pl	20-30"	No	30-36"	1/4"	60	75-90*	VT	tp early June
Endive	29	18000	5g	40'	1"	8"	18-24"	1/4"	50	60-85	H	Apr-July
Gourds, large	25	120-280	T	20 pl	6/hill	2-3/hill	6'	1/2"	60	70-90	T	tp early June
Gourds, small	25	500	1/5 oz	10 hills	6/hill	3/hill	4-6'	1/2"	60	70-90	T	late May
Kale/Collards	34-35	5000-8000	5g	1g=20'	1"	12"	2'	1/4"	50	65-85	VH	ASAP-July
Kohlrabi	35	6000	4g	1g=25'	1"	24"	24"	1/4"	50	65-85	MH	tp May/June
Leek	36	9000	T	1g=320 pl	8"	No	2'	1/2"	50	60-70	MH	tp May 1
Lettuce	36-41	25000	4g	1g=25'	1/3"	1'	12-18"	1/8"	35	40-80	H	ASAP-Aug
Mâche	29	17000	1/4 oz	25'	1/2"	2"	18"	1/4"	48	50-68	VH	ASAP-Aug
Melon	42-44	960	T	12-20 hills	3/pot	2/hill	5'	1/2"	60	75-95	VT	tp early June
Mustard	32	15600	1/8 oz	40'	1"	4-6"	2'	1/4"	50	65-85	MH	Apr-Aug
Okra	44	420	T	30 pl	12"	No	2-3'	1/4"	60	70-90	VT	tp early June
Onion/shallots	45-47	7000	T	450 pl	4"	No	12-18"	1/2"	50	60-70	MH	tp May 1
Pac Choi	33	12500	1/4 oz	14-25'	1/2"	6-12"	2'	1/4"	50	70-95	MH	May or tp
Parsley	83	14000	1/4 oz	25'	1/4"	1"	12-18"	1/4"	40	50-80	VH	Apr-Aug
Parsnip	47	7000	1/2 oz	25'	1/2"	2-3"	12-18"	1/2"	46	55-77	VH	Apr-July
Pea	48-49	125	8 oz	25'	1 1/2"	No	3-5'	3/4"	40	50-75	plants H	ASAP
Pea for fall crop	48-49	125	8 oz	25'	1 1/2"	No	3-5'	3/4"	40	50-75	blossoms,pods T	July
Pepper	50-53	2800-5600	T	10-50 pl	12-18"	No	2-3'	1/4"	60	68-95	VT	tp early June
Pumpkin	54-55	100-280	1/2-1oz	3-8 hills	5/hill	3/hill	6'	1"	60	70-90	T	late May
Radicchio	29	19000	1/2 oz	5-30'	1"	8-10"	18"	1/8"	50	60-85	H	late June
Radish	56-57	2500	1 oz	12'	1/2"	2"	18"	1/2"	40	55-85	H	Apr-Aug
Rutabaga/Turnip	73	8000-14000	1/3 oz	40'	1/2"	3-6"	18"	1/4"	40	60-95	H	Apr-July
Salsify/Scorzonera	57	2000	5/8 oz	20'	1"	2"	18"	1/2"	50	65-85	H	Apr-Jun
Shiso	33	14000	T	150 pl	8-12"	No	18-24"	1/4"	65	68-75	VT	tp early June
Spinach	58	1400-2600	1/2 oz	40'	1"	2"	12-18"	1/2"	35	45-65	VH	ASAP
Spinach, fall crop	58	1400-2600	1/2 oz	40'	1"	2"	12-18"	1/2"	35	45-65	VH	Aug
Squash, patty pan	59	200-320	5/8 oz	5-8 hills	5/hill	2-3/hill	4'	1"	60	70-90	T	late May or tp
Squash, winter	61-64	120-450	1/2-2 oz	3-15 hills	5/hill	3/hill	4-6'	1"	60	70-90	T	late May or tp
Squash, summer	59-60	160-320	1/2 oz	5-8 hills	5/hill	2-3/hill	4'	1"	60	70-90	T	late May or tp
Tomato	65-72	9000	T	6-125 pl	3'	No	3'	1/4"	50	60-85	T	tp June 1-10
Watermelon	74-75	670	T	7-14 hills	3/pot	2/hill	5'	1/2"	60	75-95	VT	tp early June
Zucchini	60	180	1 oz	4-6 hills	5/hill	2-3/hill	4'	1"	60	70-90	T	late May or tp

Key: Pkt plants=how many row feet or hills our smallest packet will plant
T=transplanted only, in our climate.
tp=transplant pl=plants g=grams, 28.4g=1oz. No=not necessary to thin
*Celery and some varieties of eggplant require fluctuating day and night temperatures for good germination.

Hardiness rating:
VT=very tender: will not survive frost, can be damaged by temperatures under 40°
T=tender: will not survive frost
MH=moderately hardy: survives light frosts
H=hardy: survives frost generally to the low twenties
VH=very hardy: will overwinter if protected

Approximate planting date:
ASAP=as soon as ground can be worked, does not thrive in heat
Approximate planting dates are for *our* Central Maine climate.
Please make appropriate adjustments for your climate, using hardiness as a guide.

Cultural information for herbs is on page 78, for flowers pages 102-103.



A few seeds with unusually thick or hard coatings may benefit from **scarification** just before sowing. This is accomplished by nicking them with a knife, a pinpoint or lightly scratching them with sandpaper.

Some seeds need to be **stratified** before sowing. This tricks the seed into thinking it has gone through winter followed by the gradual warm-up of spring. It is accomplished by first moistening and then chilling the seed for a specified period of time.

Seed counts are provided as a *guide*, not a *guarantee*. They vary from cultivar to cultivar and year to year. Planting rates will vary if intensive methods such as beds are used.
Minimum soil temperatures are the lowest that will permit *any* germination. Expect slow spotty germination if you plant below or above the ideal range. For a good stand and quickest emergence plant as close to the middle of the ideal range as possible. If you have specific cultural questions, consult more detailed resources or get in touch with us.

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Cultural Information and Planting Instructions for Herbs

Name	item#	Botanical name	ABP	height	uses	part	sow	temp	days	notes	cover	sun
Anise	4406	*Pimpinella anisum*	A	1-3'	S B M	S	DS	M	7-28		L	PF
Anise Hyssop	4407	*Agastache foeniculum*	P Z4	2-3'	B M	L F	DW TP	W	7-14	Lt	P	FP
Arnica	4409	*A. chamissonis*	P Z3	20"	M O	F	TP	C		St, Lt	N	F
Ashwagandha	4411	*Withania somnifera*	TP/A	2-3'	M	R	TP	M	7-21	Lt	N	FP
Astragalus	4412	*A. membranaceus*	P Z4	18-48"	M	R	DS TP	M	7-28	Sc Sk	L	F
Basil	4414ff	*Ocimum basilicum*	TA	8-24"	S E M	L	TP DW	W	4-10	W	R	F
Basil, Sacred	4467	*Ocimum tenuiflorum*	TA	18-24"	S M	L	TP DW	W	4-10		R	F
Bergamot	4481	*Monarda fistulosa*	P Z3	3-4'	B M O	L	DS DF	M	7-14	Lt	N	FP
Borage	4491	*Borago officinalis*	SSA	2-3'	E M O	F L	DS DF	C	7-14		P	FP
Calendula	4920ff	*C. officinalis*	SSA	18-24"	M O	F	DS	M	4-14		R	FP
Caraway	4507	*Carum carvi*	SSB	2'	S E M	S L	DS	C				F
Catnip	4509	*Nepeta cataria*	P Z3	1-2'	M B	L	DS DF	M	7-10	Lt	N	F
Chamomile	4510ff	*Matricaria recutita*	SSA	8-18"	B M	F	DS	M	10-14	Lt	N	F
Chervil	pg 80	*Anthriscus cerefolium*	SSB	12-18"	S	L	DS	W	7-14	Lt	L	P(F)
Chia	4512	*Salvia hispanica*	A	24-36"	B M E	S L	TP	W	7-14		P	F
Chives	4513	*Allium schoenoprasum*	P Z3	1-2'	S M E	L F	DS	C	7-14		L	FP
Cilantro	4517	*Coriandrum sativum*	A	1-2'	S E M	L S	DS	C	7-14		R	F(P)
Codonopsis	4520	*Codonopsis pilosula*	P Z4	5-6'	M O	R	TP	M	7-42		N	P(F)
Cumin	4522	*Cuminum cyminum*	A	1-2'	S M	S	TP	M	7-14	PP		F
Dill	4530ff	*Anethum graveolens*	SSA	2-5'	S M O	S L	DS	W	7-21		R	F
Echinacea	4545ff	*Echinacea* spp.	P Z3	2-4'	M O	R F	TP DW	W	14-21	St Lt	L	F
Elecampane	4550	*Inula helenium*	P Z3	5-8'	M O	R	TP	M	7-10	Lt	N	FP
Fennel	4553ff	*Foeniculum vulgare*	TP/A	1-3'	S M E	L S	DS	M	7-14		R	F
Feverfew	4572	*Tanacetum parthenium*	P Z4	18-30"	M O	L	TP DS	M	7-14	Lt	N	FP
Garlic Chives	4577	*Allium tuberosum*	P Z4	12-18"	S E M	L F	DS	C	7-14		L	FP
Horehound	4580	*Marrubium vulgare*	P Z3	20-24"	M C	L	TP DS	M	10-21		P	F
Hyssop	4582	*Hyssopus officinalis*	P Z3	12-18"	M O	L F	TP DF	C	7-21		R	FP
Joe Pye Weed	5150	*Eutrochium purpureum*	P Z4	5-9'	M O	R	DS DF	M	14-21	St Lt	N	P
Lady's Mantle	4584	*Alchemilla mollis*	P Z3	12-18"	M O	L	TP	M	21-30	St Lt	N	FP
Lavender	4585ff	*Lavandula angustifolia*	P Z5	2-3'	M O	F L	TP DF	W	14-28	St Lt	P	F
Lemongrass	4587	*Cymbopogon flexuosus*	TP/A	3-4'	S B M	L	TP	W	21-42		L	FP
Lemon Balm	4588	*Melissa officinalis*	P Z4	1-2'	B M S	L	TP DS	M	7-14	Lt	N	FP
Lemon Mint	4589	*Monarda citriodora*	SSA	2-3'	B M	L	DS	M	7-21		R	P(F)
Licorice	4590	*Glycyrrhiza glabra*	P Z4	18-48"	S M B	R	DW TP	M	7-28	Sc Sk	L	F
Lovage	4592	*Levisticum officinale*	P Z4	3-6'	S M	L	DS DF	M	10-21		R	F(P)
Marjoram	4616	*Origanum majorana*	TP/A	1'	S	L	TP	M	7-21	W	N	F
Marshmallow	4619	*Althaea officinalis*	P Z4	4-6'	M O	R L	DS DF	C	14-21	St	L	FP
Milk Thistle	4630	*Silybum marianum*	SSA	3-5'	M E	S F L	DS DF	M	7-14	Lt	L	F
Motherwort	4640	*Leonurus cardiaca*	P Z3	2-4'	M	L F	DS DF	M	7-21	Lt	L	F
Mustard Seed	4642	*Sinapis alba*	A	2-4'	S E M	S	DS	C	7-10		L	F
Nettle, Stinging	4644	*Urtica dioica*	P Z2	3-6'	E M	L	DS	M	10-14	Lt	R	FP
Oregano, Greek	4648	*Origanum heracleoticum*	P Z4	6-12"	S M	L	TP	M	7-21	Lt	N	F
Oregano, Zaatar	4649	*Origanum syriacum*	TP/A	8-24"	S	L	DS TP	M	7-21		N	F
Parsley	pg 83	*Petroselinum crispum*	B Z3	8-12"	S E M	L	DS DF	M	14-60	Sk	R	FP
Pennyroyal	4651	*Mentha pulegium*	P Z5	8-12"	M O	L	TP	C	10-14		N	FP
Pleurisy Root	4906	*Asclepias tuberosa*	P Z4	18-30"	M O	R	DS DF	M	14-28	St	L	F
Rosemary	4657	*Rosmarinus officinalis*	TP Z8	3-4'	S M O	L	TP	M	10-42	St Lt	P	F
Rue	4659	*Ruta graveolens*	P Z3	18-24"	M O	L	DS TP	M	10-21		R	FP
Sage	4664	*Salvia officinalis*	P Z4	2-3'	S B M	L	TP DS	W	10-21	Lt	P	F
Sage, White	4666	*Salvia apiana*	P Z6	2-3'	M C	L	TP	W	14-28	W	L	F
Savory, Summer	4672	*Satureja hortensis*	A	12-18"	S M	L	DS	W	7-14	Lt	R	F
Savory, Winter	4674	*Satureja montana*	P Z3	6-12"	S M	L	TP	M	10-21	Lt	N	F
Schisandra	4677	*Schisandra chinensis*	P Z4	15-25'	M E O	B	TP	C	14-60	Sk St	P	P(F)
Shiso	pg 33	*Perilla frutescens* var. *crispa*	TA	2-3'	S M O	L	TP	W	7-14	Sk St Lt	L	FP
Skullcap, Baikal	4681	*Scutellaria baicalensis*	P Z4	1-2'	M O	R	TP	M	14-21	St	P	F
Skullcap	4682	*Scutellaria lateriflora*	P Z4	1-2'	M O	L F	TP	M	14-21	St	P	P
Stevia	4684	*Stevia rebaudiana*	TP/A	24"	S	L	TP DW	W	7-21	Lt	L	FP
St Johnswort	4686	*Hypericum perforatum*	SP Z3	1-3'	M	F L	DS DF	M	14-28	St Lt	N	F
Thyme	4687	*Thymus vulgaris*	P Z4	10-12"	S M	L	TP	C	14-28	Lt	N	F
Valerian	4689	*Valeriana officinalis*	P Z3	3-5'	M O	R	DS	M	10-21	St	L	FP
Vervain	4692	*Verbena hastata*	P Z3	5-6'	M O	R	TP	M	21-28	St Lt	N	F
Woodruff	4698	*Galium odoratum*	P Z5	6-8"	S M C	L	DS TP	C	21-200	St	L	Sh,P
Yarrow	4699	*Achillea millefolium*	P Z2	1-2'	M O C	F L	DS DF	W	10-14	Lt	N	F

ff=and following

ABP: A=annual, B=biennial, P=perennial, Z=hardiness zone, TA= tender annual, SSA=self-sowing annual, SSB=self-sowing biennial, SP=short-lived perennial, TP=tender perennial, TP/A=tender perennial grown as annual.

height: typical height at maturity.

uses: S=seasoning, M=medicine, O=ornamental, B=beverage, E=edible, C=ceremony.

part: part that is used: S=seed, L=leaf, F=flower, R=root, B=berry.

sow: DS=direct sow in spring ASAP, DW=direct sow when soil has warmed or after danger of frost has passed, TP=transplant, DF=direct sow in fall.

Nearly any herb can be started indoors and transplanted, but this tends to be more work; TP means this method is strongly suggested for best results. Many perennials can be started in early summer indoors or out; they take several years to mature anyway, what's a few months?

temp: suggested soil temperatures for good germination: C=cool, 60-65°, M=moderate, 65-70°, W=warm, 70-85°.

days: number of days to seedling emergence.

notes:
Lt=needs light to germinate,
Sk=soak seed 12-24 hrs,
Sc=scarify seed with sandpaper or emery board,
W=water sparingly,
PP=start in peat pots and take care not to disturb root in transplanting, St=stratify seed; place in moist soil and freeze or refrigerate or alternate between the fridge and freezer.

Nearly any herb requiring stratification can be fall-sown outdoors or in a cold frame–let winter do the work for you!

cover:
L=cover lightly, P=pat down gently,
R=rake or scuffle into soil, N=no, don't cover.

sun:
F=full sun, P=part sun, Sh=shade,
FP=prefers full sun but tolerates part, PF=prefers part but tolerates full,
P(F)=prefers part, tolerates full only in cool or moist areas,
F(P)=prefers full sun, needs part shade in hot climates.

HERBS

See chart opposite for uses and cultural information. A botanical index is on page 77. Herbs and flowers are arranged by common name, alphabetically.

About medicinal herbs: Archeological evidence dates the medicinal use of herbs back 60,000 years to the Neanderthals. 85% of the world's population employ herbs as medicines, and 40% of pharmaceuticals in the U.S. contain plant-derived materials. Fewer than 10% of higher plant species have been investigated for their medicinal components. Interest in traditional herbal remedies continues to grow.

Burdock (pg 57), Calendula (pg 87), Pearly Everlasting (pg 95), Breadseed Poppy (pg 96) and oats, mammoth red clover and alfalfa (in the Farm Seed section) also have medicinal uses. Medicinal herbs such as black cohosh are available as plants from our Trees catalog. Some herbs are customarily grown from divisions because they cannot come true from seed, such as scented thymes and flavored mints; some require fall sowing of fresh seed, such as sweet cicely and angelica.

Drying herbs at home is not difficult. Whole leaves retain their flavor at least a year. To use fresh herbs in cooking, triple the dried quantity called for in a recipe.

All herbs are open-pollinated, except Round Midnight basil.

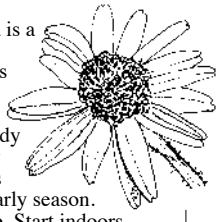
4406AN Anise *Pimpinella anisum* Annual bears seeds with subtle licorice overtones and a spicy warming flavor. Drunk as a tea in the Middle East. Used in baking, an essential ingredient in Springerle. Anise helps ease indigestion, gas and colic, also relaxes dry tight coughs. Plant in average-to-rich well-drained warm soil in full sun after danger of frost. Sets small white umbel flowers in July. Seed ripens in August and September. 1–3' tall. ~200 seeds/g. ④

A=0.5g, $1.60 **B**=2g, $3.00 **C**=8g, $4.00 **D**=32g, $6.00

4407AO Anise Hyssop OG *Agastache foeniculum* Bushy midwestern native permeates the air with sweet licorice fragrance. An outstanding insectary plant, its long-blooming nectar-laden purple flowers attract bees and parasitic wasps, butterflies and hummingbirds. Anise-scented foliage and flowers delightful as a tea or culinary seasoning, or filler in mixed bouquets. The tea induces sweating and strengthens the heart, was used also for fevers, colds, and by Native Americans as a cough medicine. Sow or transplant 1–1 1/2' apart in well-drained warm loam. Perennial can grow 3' tall, 2' wide. Vigorous self-sower. Not related to anise or hyssop. Zone 4. ~2,600 seeds/g. ✿ ①

A=0.2g, $1.70 **B**=1g, $3.50 **C**=5g, $7.00 **D**=25g, $18.00

4409RO Arnica Chamissonis OG *A. c.* Meadow arnica is a native American species that will grow successfully in low-elevation gardens. *A. chamissonis* has been tested and is generally accepted as a substitute for the official European *A. montana*. Use the yellow flowers at full flowering either fresh or dried, in compresses and salves as an external remedy on unbroken skin to reduce swelling and bruising caused by traumatic injury, and on arthritic joints. 20" perennial yields well with multiple flower stalks blooming for most of the early season. Surface sow, then stratify seed and give it light to germinate. Start indoors and transplant into humus-rich soil in full sun. Zone 3. ~2,500 seeds/g. ✿ ①

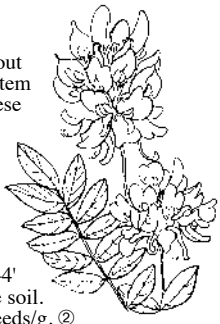


A=0.02g, $1.80 **B**=0.1g, $3.50

4411WO Ashwagandha OG *Withania somnifera* In Sanskrit its name means 'the vitality of the horse' and it imparts such energy; *somnifera* promotes sleep. An herb of wide value, generally known as the ginseng of Ayurvedic medicine. Upright shrub exceeds 2' with inconspicuous green-to-yellow flowers ripening to red berries. Roots are dried at the end of the growing season and used internally powdered or tinctured (other plant parts are toxic if eaten). Herbalist Deb Soule harvests the roots when the berries ripen in mid-October. Her delightful book, *How to Move Like a Gardener*, (**9636** in the book section) has more details about ashwagandha. One of the best rejuvenators, especially good for the elderly, it tones without overstimulating and can be used in all conditions of weakness and chronic debilitation. Needs warmth and light to germinate. Sow indoors in the spring and transplant out in June; prefers dry stony soil in sun or partial shade. Perennial in Zone 10, grown as an annual. ~1,000 seeds/g. ②

A=1g, $2.80 **B**=4g, $8.00 **C**=12g, $20.00

4412LO Astragalus OG *A. membranaceus*
Safe effective adaptogenic tonic to use daily throughout the year, aiding digestion and promoting immune system health (*wei qi*). Called *huang qi* in Chinese and Chinese Milk Vetch Root in English. Especially good for vegetarians. Also used in cases of exhaustion, food allergy or depression, and to increase assimilation, improve digestion, and eliminate excess fluids. In his book *Healing Lyme* Stephen Harrod Buhner says that astragalus can prevent and treat the many symptoms of Lyme disease. Small yellow pea-like flowers on upright stems with vetch-like leaves. 1 1/2–4' perennial. Plant in deep well-drained slightly alkaline soil. Harvest 4- to 6-year-old roots in fall. Zone 4. ~250 seeds/g. ②



A=0.5g, $2.50 **B**=3g, $7.00 **C**=9g, $14.00 **D**=27g, $32.00

Basil

Ocimum basilicum

~600 seeds/g. Indispensable culinary herb, in cultivation for more than 3,000 years. By far our most popular herb, the various kinds selling over 11,000 packets in 2018.

Culture: Direct seed when soil warms in late spring or transplant after danger of frost in well-drained moderately rich soil. Young seedlings will damp off if heavily watered during cool cloudy weather. Water sparingly at first. Use row covers to enhance early season vigor and speed maturity. Thin to 8–12", top mature plants to induce branching and increase total yield. Harvest before plants blossom. Absolutely intolerant of frost, damaged by temperatures in the 30s.

Diseases: Where so indicated our varieties have been sampled and found to be fusarium-free. While not a guarantee that the entire lot is fusarium-free, a negative test improves the odds. No samples were taken for varieties not so indicated.

Sweet (70 days) The heaviest-yielding variety, recommended for drying, all-around great eating, and large-scale pesto production. We sold more than 3,000 packets last year of these two strains of Sweet Basil.

4414SB Sweet Genova strain. Tested for fusarium. ⑤

A=4g, $1.90 **B**=28g, $5.00 **C**=112g, $12.00 **D**=336g, $33.00

4415WO Sweet OG Tested for fusarium. ⑤

A=4g, $2.30 **B**=28g, $7.60 **C**=112g, $22.00 **D**=336g, $55.00

4418GB Genovese (70 days) The choice of many connoisseurs for making pesto. Also called Perfumed Basil. Leaves are slightly smaller and finer than Sweet Basil with more aroma and potency. ②

A=2g, $1.60 **B**=10g, $3.00 **C**=40g, $6.00 **D**=160g, $12.00

4422MB Mammoth No grape leaves available? Lettuce-leaf type has very large ruffled leaves suitable for rolling or stuffing. Flavor similar to sweet basil. Give plenty of space per plant so leaves can dry out after wet spells. However, the smaller types are easier for drying. ②

A=0.5g, $1.60 **B**=5g, $3.30 **C**=15g, $5.00 **D**=60g, $11.00

4430SG Spicy Globe *O. b. minimum* (70 days) Marvelous little basil grows to about 8" and maintains a compact mound of light green leaves and white flowers. Its leaves are small, thin and strongly scented. Great as an ornamental border, in a windowbox, or as an indoor potted plant that can be snipped for culinary use. ②

A=0.5g, $1.90 **B**=5g, $3.50 **C**=15g, $8.00 **D**=60g, $17.00

4436AB Anise Originally from Persia. Vigorous mulberry-tinted basil with anise fragrance makes a highly decorative tall bushy plant. Slow to bolt. Great in Italian tomato sauces. Also used in Thai and various Mediterranean cuisines. ②

A=0.5g, $1.80 **B**=5g, $3.50 **C**=15g, $8.00 **D**=60g, $14.00

4449SD Sweet Dani Lemon (65 days) 1998 AAS for its extraordinary vigor that manifests even in the seedling stage and continues through the summer. Tall upright plant reaching almost 30" is 2–3 times as vigorous as Lemon basil with heavier yields of large light green leaves. Does not need coddling. Tested for fusarium. PVP expired February 2017. ⑤

A=0.5g, $2.50 **B**=1.5g, $4.30
C=4.5g, $9.00 **D**=13.5g, $20.00

4450BB Mrs. Burns Lemon (64 days) Chosen for its intense lemony fragrance. Medium-sized bright green leaves. Heirloom variety grown for 60 years in southeastern New Mexico, first offered commercially by Native Seeds/Search, has now achieved nationwide fame. ③

A=0.5g, $1.90 **B**=5g, $4.00
C=15g, $5.00 **D**=60g, $12.00

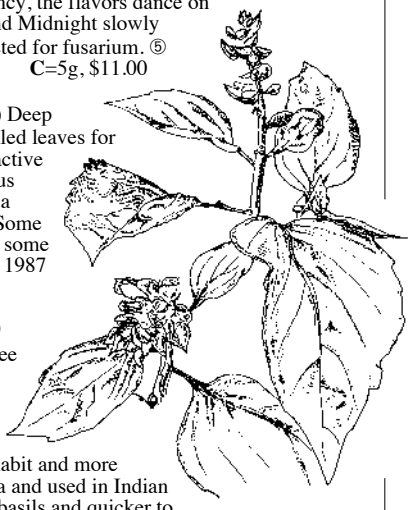
4453LO Lime OG *O. americanum* (65 days) Imparts a robust lime fragrance to the patch. More vigorous than lemon basil, darker green leaves with a strong lime flavor. ③

A=0.25g, $1.70 **B**=1g, $3.80 **C**=5g, $6.00
D=15g, $7.80

More basil next page.

basil continued

4459RM Round Midnight (65 days) F-1 hybrid. This lustrous purple basil lures you from across the garden with its broad dark lightly ruffled gently serrated leaves wafting an aroma of allspice, nutmeg and light musk. Noting the 12–14" stature and well-branched uniform habit, you bend to pluck a tender leaf. Savory with mild pungency, the flavors dance on your tongue. As weeks follow, Round Midnight slowly reveals spikes of purple flowers. Tested for fusarium. ⑤
A=0.25g, $2.20 **B**=1g, $4.00 **C**=5g, $11.00 **D**=15g, $24.00



4461PR Purple Ruffles (85 days) Deep purple plants with serrated and crinkled leaves for striking visual contrast. Imparts attractive color to basil vinegars. Not a vigorous grower in our climate but will reach a height of 18" in peak summer heat. Some plants will have green foliage and in some the green will be mixed with purple. 1987 AAS. Tested for fusarium. ⑤
A=0.25g, $2.30 **B**=1g, $4.30 **C**=5g, $12.00 **D**=15g, $32.00

Sacred OG (100 days) *Dropped*. See Kapoor Tulsi OG below.

4468KO Kapoor Tulsi OG *O. tenuiflorum* (100 days) A superior strain of Tulsi or Sacred basil, with a more compact growth habit and more pungent sweet flavor. Native to India and used in Indian and Thai cuisine. Spicier than other basils and quicker to go to seed, but still usable when covered with purple flowers. Used in Ayurvedic medicine as a poultice on acne, ringworm, eczema and insect bites. Makes a tasty tea, a Fedco staff favorite at break time, for it strengthens the immune system and increases oxygen uptake in the brain. Plants stand a bit more cold than other basils. ~1500 seeds/g. ①
A=0.1g, $2.00 **B**=1g, $4.00 **C**=7g, $9.00 **D**=21g, $16.00

4470TB Thai (60 days) Lends its distinctly strong licorice-anise basil flavor to Thai food. An attractive 12–18" fine-leaved plant with purple stems, seed heads and flowers. Good container plant as well. ③
A=0.5g, $1.70 **B**=5g, $4.00 **C**=15g, $6.00 **D**=60g, $16.00

4481WO Wild Bergamot OG *Monarda fistulosa* Our native wildflower species of the familiar bee balm is a great addition to the perennial border in light dry alkaline soils. The 3–4' plants bear aromatic lavender blossoms highly attractive to pollinators. Leaves impart pungent aroma to teas, potpourri, meats and beans. Traditionally used as an aromatic stimulant to improve digestion and increase perspiration. Native Americans employed it internally to combat colds and flus and externally to calm skin eruptions. Zones 3-9. ~2,000 seeds/g. ✿ ①
A=0.1g, $1.90 **B**=0.4g, $3.50 **C**=2g, $6.50 **D**=4g, $11.00

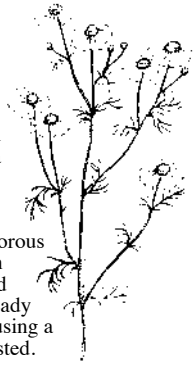
4491BO Borage OG *Borago officinalis* (55 days) Gloria Seigars suggests it as a great border for the vegetable garden where the dense plants smother weeds. Donna Dyrek favors if for attracting mason bees. Bears many small flowers that open blue, turn purple and then pink and make colorful additions to salads. Enjoy the cooling properties of very young leaves on a hot day. Frozen in ice cubes, it lends cucumber flavor to cold drinks. A nourishing tea for nursing mothers. Used in cough syrups. Seeds a good source of GLAs. Bushy 2–3' annual likes sun, prefers moist well-drained soil. Will self-sow; young plants are easy to move around. Survives light frosts. ~50 seeds/g. ✿ ③
A=0.5g, $1.70 **B**=4g, $3.50 **C**=16g, $5.00 **D**=80g, $12.00

4507CW Caraway *Carum carvi* Feathery-leaved 2' biennial grown primarily for its seeds to season soups, stews, breads and pastries. Its leaves are also edible, though milder than the seeds. Direct seed either in early spring or late summer for seeds the second year. Likes full sun, sandy well-drained soil. Will self-sow. Zones 3-9. ~350 seeds/g. ②
A=0.5g, $1.60 **B**=7g, $3.00 **C**=28g, $4.80 **D**=112g, $9.00

4509NP Catnip *Nepeta cataria* "If you set it, the cats will get it; if you sow it, they won't know it." Hardy perennial, will self-sow once established. Likes rich or sandy soils, tolerates poor soil and drought. Calms mild stomach disorders, produces restful sleep and relieves fever when added to teas. Tovah Martin writes that rats are reputed to despise it, so it is sometimes used as a companion plant for melons and squashes. Researchers at Iowa St U who claim catnip is a top-notch mosquito repellant suggest rubbing crushed leaves on the skin is several times more effective than using DEET. Zones 3–8. ~1,400 seeds/g. ✿ ②
A=1g, $1.60 **B**=7g, $4.00 **C**=28g, $8.00 **D**=112g, $16.00

Thanks for supplying an excellent variety of medicinal herbs!
– Alexis C Doshas, West Wardsboro, VT

4511ZL Zloty Lan German Chamomile *Matricaria recutita* Powerful yet gentle, long used to promote relaxation, chamomile is one of the most widely known herbs. Calms nerves, soothes the stomach and irritated skin. Mild sedating properties help insomnia, pain and colic. The flowers have high essential oil content, rich in chamazulene, a powerful anti-inflammatory agent with a wonderful aroma. Zloty Lan, a unique Polish tetraploid, translates as Golden Fields; there's a pun on *Zloty*, a monetary unit in Poland, since your beautiful golden fields will turn to money with these robust and more vigorous 7" plants making a bigger better yield than plain German chamomile. This annual likes moist well-drained soil and can be direct seeded or transplanted. Flower heads are ready to gather when the petals fall back from the center. Try using a blueberry rake to harvest them. May self sow if unharvested. ~1,750 seeds/g. ③



A=1g, $2.20 **B**=3g, $4.00 **C**=15g, $9.00 **D**=45g, $20.00

Chervil *Anthriscus cerefolium* (60 days to full maturity) The Greeks referred to it as *khaire-phyllon*, or 'leaf of joy,' and carried sprigs to bless their friends. Superior slow-bolting strain of this annual grows vigorously. Delicate lacy leaves with distinct flavor good in soups, with fish or asparagus. Essential ingredient in mesclun. Direct seed before a rain in early spring or summer in rich well-drained soil with light but constant moisture. Begin harvesting leaves 6–8 weeks after sowing. In warmer locations performs best as a fall crop. Also good for microgreens. ~12,000 seeds/oz. 1/16oz packet ~750 seeds.

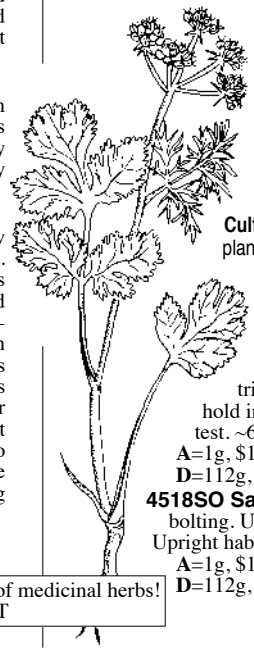
3044CH Chervil ②
A=1/16oz, $1.40 **B**=1/8oz, $2.10 **C**=1/2oz, $3.00 **D**=1oz, $4.00 **E**=4oz, $7.00 **K**=1lb, $19.00

3045CO Chervil OG ①
A=1/16oz, $1.90 **B**=1/8oz, $3.00 **C**=1/2oz, $8.00 **D**=1oz, $14.00 **E**=4oz, $48.00 **K**=1lb, $180.00

4512CH Chia *Salvia hispanica* Who hasn't heard the call to sprout these seeds as kitchen kitsch? Now you can grow these ancient delicious seeds into a crop of your own—outdoors, in the ground—though because of their long season, they perform best if started indoors and transplanted out. High in essential fatty acids, the seeds benefit the body by regulating sugar while helping to remove toxins. Use the leaves either dried or fresh as a tea—or even feed them to your livestock. Tender annual: because of Chia's preference for flowering in short-day conditions, there may not be enough time to produce seed in northern areas before the first frost kills the plants. ~160 seeds/g. ③
A=1g, $1.90 **B**=3g, $4.00 **C**=12g, $7.00 **D**=36g, $13.00

4513CO Chives OG *Allium schoenoprasum* (80 days) Hardy perennial. 1–2' hollow grasslike leaves enhance any dish with their subtle onion flavor, providing a fine treat in very early spring. Lilac-colored flowers bloom in June and July, can be eaten or enjoyed in arrangements fresh or dried. Used in Asia as a remedy for colds and flu. For best production, grow in well-drained soil and divide clumps every few years. However, nearly indestructible even with neglect in extreme conditions. Can be brought inside for the winter. Zone 3. ~900 seeds/g. ③

A=0.5g, $1.80 **B**=7g, $4.00 **C**=28g, $10.00 **D**=112g, $28.00



Cilantro

Coriandrum sativum

Used for its fresh green foliage, its edible flowers that attract beneficial insects, and its dried seeds—coriander. Essential flavoring in Indian, Chinese, Southeast Asian, Persian, North African and Latin American cooking.

Culture: Annual grows to 2' with whitish blooms. Make succession plantings in average well-drained soil and keep watered for lushest leaf production. Thin early. In warm locations will stand longest as a fall crop. Self-sows.

4517RO Caribe OG (55 days) The best of the ten strains of cilantro in our previous trial. Longstanding; was only beginning to flower on July 9. In this year's trials Caribe remains the winner in both taste and ability to hold in the heat—our July 2018 heatwave gave it a really good test. ~60 seeds/g. ④
A=1g, $1.70 **B**=4g, $3.00 **C**=28g, $7.00 **D**=112g, $21.00 **E**=448g, $62.00

4518SO Santo OG (55 days to leaf; 95 days to seed) Bred for slow bolting. Uniform and fast growing, high yielding with good flavor. Upright habit makes it easy to pick. ~71 seeds/g. ②
A=1g, $1.50 **B**=4g, $2.90 **C**=28g, $4.50 **D**=112g, $10.00 **E**=448g, $25.00

4520CD Codonopsis *C. pilosula* Also called Poor Man's Ginseng and *dang shen* in China. Perennial to Zone 4. Used in Chinese medicine like ginseng, but considerably easier to grow than true Panax ginseng. Also fun to grow as a novel ornamental. Tendrilly twining vines with small ovate leaves grow to 3–4' long by their second year. Mature vine about 5–6' long. Buds look like green peas, swell to little green balloons, flower as green bells with purple veining, then mature to five-sided-balloon seed pods. Harvest long firm sweet roots with tight skins in autumn at 4–6 years. Used to support energy levels, digestion, immune response, and to clear excess mucus from the lungs. Full sun to part shade, well-drained soil. ~3,700 seeds/g. ②

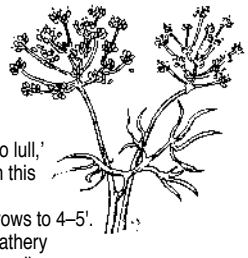
A=0.02g, $2.50 **B**=0.06g, $6.00 **C**=0.18g, $13.00

4522CU Cumin *Cuminum cyminum* (100-115 days) After black pepper, the most widely used spice in the world. Seeds of this culinary cumin are important in flavoring Mexican and Indian cuisine and are said to aid digestion. Foliage is fragrant and ferny, somewhat like dill; but unlike dill, plants grow only 1–2'. Annual, takes a long time to mature so start indoors in cold climates. Our thanks to Lee Cooper for suggesting that we spice up our herb selection with cumin. ~300 seeds/g. ②

A=0.5g, $1.50 **B**=1g, $2.80 **C**=6g, $5.00 **D**=30g, $8.00

Dill

Anethum graveolens



~500 seeds/g. Name derived from the Norse *dilla*, meaning 'to lull,' as the plant is said to have soothing properties. Best known in this country for pickling, but essential for Russian, Polish and Hungarian cuisine. Annual, sometimes classed as biennial, grows to 4–5'. Self sows. Upright plant branches out from single stalk; the feathery leaves known as dill weed. Likes well-drained moderately rich soil.

Bouquet (55 days) Bouquet is usually grown for dill weed production because its leaves are sweeter and more refined than those of Mammoth. Foliage should be harvested early, before seed stalks mature. ✿

4530BU Bouquet The biggest, best and ferniest strain of the four in our lot grow-out. ②

A=4g, $1.80 **B**=28g, $4.00 **C**=224g, $13.00 **D**=448g, $17.00

4531BO Bouquet OG ②③

A=2g, $2.00 **B**=8g, $3.00 **C**=40g, $5.60 **D**=200g, $13.50

4536FL Fernleaf (55 days) 1992 AAS. A dwarf variety suitable for small gardens or patio containers, Fernleaf grows only half as tall as other varieties and is very slow to go to seed. One September, most of our May planting had not yet bolted, and its abundant piquant foliage was still suitable for harvesting. Multi-branching plants spread 18–24". ✿ ⑤

A=0.5g, $2.00 **B**=1.5g, $4.00 **C**=4.5g, $7.00 **D**=13.5g, $18.00

4542MM Mammoth Variety generally grown for its seeds. Can also be used as dill weed, but the foliage is slightly darker, coarser and stronger-tasting than that of Bouquet. Otherwise, differences between the two in plant height and habit are barely discernible. ✿ ②

A=4g, $1.70 **B**=28g, $3.50 **C**=224g, $13.00 **D**=448g, $20.00

Echinacea spp.

~250 seeds/g. Possibly the best-known of the medicinal herbs, widely used as an immune-system stimulant. Species contain slightly differing constituents, but all are antibacterial and antiviral. At least 14 native North American nations used Echinacea for similar purposes: sore throat, toothache, infection, wounds, snake bite and skin disorders. Joanna Linden likes to tincture flowers and leaves in August and use the same alcohol to tincture seeds and third-year roots in October.

A wonderful garden perennial: late summer blooms attract butterflies and bees and make good cutflowers; dew collects in the spiral mandala coneheads.

Culture: Start indoors at 70–75˚, germinates in 15–20 days. Grow on at 60–65˚. Set out 18–24" apart. Zones 3–10.

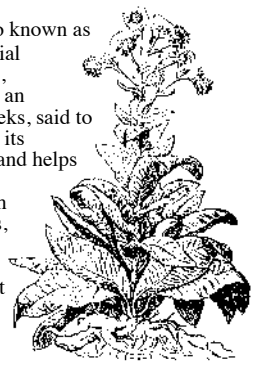
4545NL Narrow-Leaved *E. angustifolia* Smallest and least vigorous of all the Echinacea species, but the one with the most medicinal tongue-tingling properties. Small taproots can be difficult to harvest. Over-harvesting in the wild by zealous collectors has endangered this species, so cultivate some for your use. Short rose-pink petals, spreading and toothy. Tapered hairy leaf. 6–20" tall. Native to prairies west of the Mississippi, Saskatchewan to Texas. Herbalist Richo Cech suggests stratifying seeds for 30 days. ✿ ③

A=0.5g, $1.80 **B**=1.5g, $4.60 **C**=6g, $9.00 **D**=24g, $29.00

4547CO Purple Coneflower OG *E. purpurea* Large, showy, vigorous and hardy, a popular garden perennial since the early 1700s. Large fibrous roots are easy to harvest. Though not a mix, the colorful flowers vary from rose to lavender to purple. Long downward-curving petals around large spiny copper-colored centers. Broad toothed leaf. Easy-to-grow, 2–4' tall, native to a wide range of habitats, from Appalachian woods to midwest prairies. Often self-sows. ✿ ①②

A=1g, $2.00 **B**=4g, $4.30 **C**=16g, $7.50 **D**=48g, $18.00

4550EO Elecampane OG *Inula helenium* Also known as Horseheal, Wild Sunflower and Elf Dock. Perennial grows 5–8' with 2–3" bright yellow rayed flowers, blooming May to August. Large dramatic plant is an excellent lung tonic. Important to the ancient Greeks, said to have sprung from the tears of Helen of Troy, thus its botanical name. Mucilaginous root relaxes lungs and helps clear mucus, calms cough. Antibacterial and antifungal, also used for asthma, bronchitis, cough and flu, especially in children. Helpful for scabies, herpes and other skin disorders (an old name is Scabwort). Plant in heavy moist well-drained loam with generous helpings of compost. Dig root in mid fall. Zone 3. ~1,600 seeds/g. ①



A=0.1g, $2.10 **B**=0.3g, $4.00
C=1.2g, $7.50 **D**=3.6g, $12.00

4560FO Seed Fennel OG (65 days) This fennel, which doesn't bulb, puts all its energy into making seeds. Although used similarly to anise in cooking, fennel seed is much more medicinal, aiding digestion while reducing flatulence and also soothing bronchial coughs. The seeds shed readily when mature, so you may want to bag seed heads on the plant to contain them. It's easy to grow, although be aware that too much moisture at bloom time can prevent the formation of a good seed crop. Harvested after the flowers turn brown, seeds will continue to dry if spread in a single layer on a screen. In about two weeks they should be fully dried and ready for the spice rack. ② **NEW!**

A=0.5g, $1.80 **B**=3g, $3.20 **C**=9g, $6.00 **D**=27g, $14.00

Vegetable Fennel is now with the vegetables; see pages 24-25.

4572FO Feverfew OG *Tanacetum parthenium* Strongly scented bushy 18" plant with beautiful daisy-like white blooms good in bouquets. A tea from the chrysanthemum-like leaves was traditionally used as a relaxant. Chewing regularly on a bitter leaf or two is said to prevent migraines. Sow indoors, set out in average well-drained soil when seedlings have four true leaves. Perennial to Zone 4, maybe 3. Self-sows. ~5,000 seeds/g. ①

A=0.1g, $2.30 **B**=0.4g, $4.20 **C**=2g, $9.00 **D**=8g, $25.00

4577GC Garlic Chives *Allium tuberosum* Also called Chinese chives or Chinese leeks. Known as *jiu cai* in China. Grows like chives, 1' tall, but has flat strap-like leaves that taste like garlic and can be used as a garlic substitute in salads and sautéed vegetables. White flowers are edible, long-lasting in bouquets and good in dried arrangements. Sow thinly in spring, harvest sparingly till plants are established; after that they are vigorous and self-sowing. *Seed is very short-lived*. Perennial, but protect in cold areas. Easier than chives to bring indoors for winter. Zone 4. ~210 seeds/g. ②④

A=0.5g, $1.90 **B**=14g, $3.60 **C**=56g, $8.00 **D**=168g, $20.00

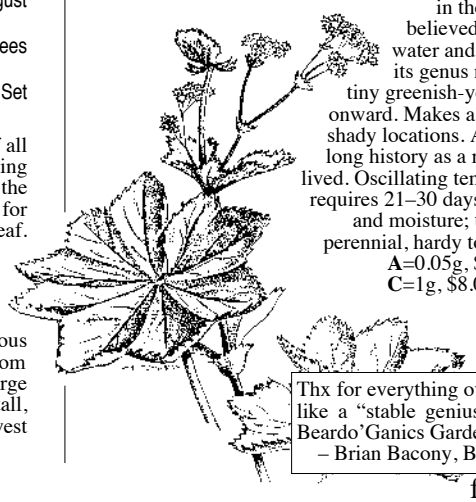
4580HH Horehound *Marrubium vulgare* Perennial forms a 2' bushy stand of grey-green wooly leaves, making a good border. Horehound candies were once common for soothing coughs and the tea makes a strong remedy for coughs and lung congestion. One of the bitter herbs of Passover. Transplant while seedlings are still small or direct seed into light dry sandy soil. Hardy to Zone 3. ~950 seeds/g. ③

A=0.2g, $1.70 **B**=1g, $3.50 **C**=4g, $7.00 **D**=12g, $13.00

4582HY Hyssop *Hyssopus officinalis* Beautiful aromatic perennial border plant that produces spikes of indigo flowers, traditionally used in cough syrups. Can be planted with rosemary and lavender for a colorful and fragrant effect. Its aroma stimulates alertness and mental clarity. Was used as a strewing herb, thrown on floors to mask odors. Add slightly bitter leaves to salads, soups and stews, or use as an expectorant tea. *People with epilepsy and pregnant women avoid use*. Dry light or sandy soil. Normally hardy to Zone 3, but we have had significant losses in very harsh winters. ~850 seeds/g. ✿ ②

A=0.5g, $1.70 **B**=4g, $3.30 **C**=16g, $7.50 **D**=48g, $15.00

4584LM Lady's Mantle *Alchemilla mollis* I first admired this attractive plant in the lovely gardens at Avena Botanicals. Softly hairy wavy-edged leaves unfold like fans in early spring. Leaves hold rain and dew, sparkling in the early morning light. Alchemists believed the collected dew was the purest water and used it in their preparations; thus its genus name. Bears large loose sprays of tiny greenish-yellow flowers from early summer onward. Makes a good border and ground cover in shady locations. Astringent and regenerative, has a long history as a remedy for women. Seed is short-lived. Oscillating temperatures aid germination which requires 21–30 days. Likes average well-drained soil and moisture; tolerates most conditions. 12–18" perennial, hardy to Zone 3. ~2,600 seeds/g. ③



A=0.05g, $1.90 **B**=0.2g, $3.50
C=1g, $8.00 **D**=4g, $14.00

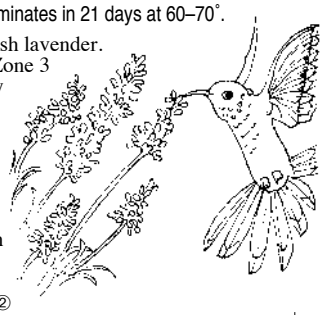
Thx for everything over the years. You make me look like a "stable genius" when people see the garden!
Beardo'Ganics Gardening "Mulch Love"
– Brian Bacony, Berkeley, CA

Lavender

Lavandula angustifolia

~1,000 seeds/g. Famous for centuries for its sweet soothing lasting scent. Flowers used dried in sachets, wreaths and arrangements, and as a tea for headache or exhaustion. Hardy perennial reaching 3', woody shrublike plant with grey-green needle-like foliage and lavender flowers growing on long-stemmed spikes. Attracts small pollinating insects and syrphid flies.
Culture: Likes well-drained alkaline sandy soil. Germinates in 21 days at 60–70˚.

4585LO Lavender OG Also known as English lavender. Texts claim hardy to Zone 5, but our patch in Zone 3 survived ten straight winters until a particularly hard one. ✿ ③
A=0.2g, $1.80 **B**=1g, $3.80
C=5g, $10.00 **D**=20g, $26.00



4586VB Vicenza Blue More compact habit than common lavender with deeper green leaves and a more powerful, less sweet, aroma. 1' plants have bold clustered flower spikes with deep color from mid-July to early September. Flowers the first year without vernalization. Long-day perennial needs full sun. Zone 5. ✿ ②
A=0.03g, $2.70 **B**=0.12g, $6.60 **C**=0.6g, $23.00

4587LG Lemongrass *Cymbopogon flexuosus* Nikos searched for years for this culinary strain of lemongrass, native to Southeast Asia, used in food and medicine there for millennia, and adopted worldwide for the bright lemony flavor it imparts. Coarse grass sets 6–12 harvestable stalks, looking something like pencil leeks, slightly bulbous at the base. Harvest the tough stalks low; the plants will re-grow, though probably only to 3' here in Maine rather than the 6' achieved in the tropics. Use chopped or ground, fresh, dried or frozen, add to soups, sauces and stir-fries, or make into a delicious medicinal tea to aid digestion. Holli Cederholm reported that it's well worth growing for market: her customers raved about its quality compared to the supermarket's, and one used it for infusing cocktails. Perennial in Zones 9-11, grown as an annual in our climate unless potted up and brought indoors for the winter. Not a great germinator; 40% is considered good. Sow indoors and transplant out 8–12" apart. ~2,000 seeds/g. ②③
A=0.1g, $3.00 **B**=0.3g, $7.50 **C**=1.2g, $20.00 **D**=6g, $40.00

4588LB Lemon Balm *Melissa officinalis* The Greek word *Melissa* means 'honeybee'; the plant in flower attracts them. Perennial growing to 2'. Gather its yellow-green scalloped lemony leaves before plants flower. Delicious in salads, as a tea, with fruit, or dried for sachets. Flowers are edible. Essential oil of lemon balm smells fabulous and is highly effective against cold sores, but is very expensive. Steep multiple batches of leaves in olive oil to make an infused oil, one of the many ways to enjoy this relaxing calming comforting uplifting herb all winter. Likes very well-drained fertile soil; wet ground may winterkill it more than cold. However, tends to self-sow in the same years that the roots winterkill. Zone 4. ~1,800 seeds/g. ✿ ②
A=0.3g, $1.70 **B**=3g, $3.50 **C**=15g, $7.00 **D**=45g, $16.00

4589MT Lemon Mint *Monarda citriodora* An annual member of the bee balm genus in the mint family. Native to Appalachia and related to Oswego Tea. The tiered pinkish-purple flower spikes of this showy 2–3' plant are long-lasting in fresh bouquets and can be dried for everlasting arrangements. Its lemon-scented leaves are delicious and commonly used to impart a coarse mint flavor with a hint of oregano to tea. Inhale the steam to relieve cold symptoms. Best in light moist soil. ~1,800 seeds/g. ✿ ②
A=1g, $1.70 **B**=7g, $3.70 **C**=28g, $7.00 **D**=84g, $20.00

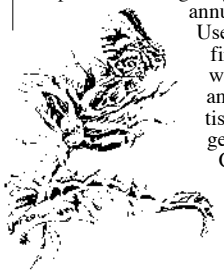
4590LC Licorice *Glycyrrhiza glabra* Sweet and soothing root contains glycosides similar to the body's own natural steroids. Beneficial for revitalizing adrenal glands, good for colds and bronchitis, reduces throat irritation, yet an expectorant and anti-spasmodic. Adds sweetness, harmony and palatability to nearly every herbal combination. Give plants lots of room so they can create the roots and runners you want. Weak competitor against weeds. Prefers sandy well-drained loam and a mulch to prevent heaving. Harvest 3–4 year-old roots in the fall. Perennial to Zone 4, grows 1½–4', bears white to violet flowers. ~90 seeds/g. ③
A=0.1g, $2.40
B=0.3g, $5.00
C=0.9g, $10.00
D=4.5g, $35.00

4592LV Lovage *Levisticum officinale* An underrated herb with many uses. Leaves have a strong celery taste and can flavor soups, stews and casseroles. Crush seeds and add to bread and pastries; candy stems and roots in sugar syrup. Said to restore the appetite and revive the love of life. Second-year plants are best for drying. Formerly used to mask the bitter herbs in medicinal concoctions. Umbelliferous perennial attracts beneficial insects, grows 3–6' and makes a dramatic architectural element in a decorative border. Likes moist rich deep well-drained soil. Zone 4. ~140 seeds/g. ✿ ②
A=0.5g, $1.70 **B**=4g, $4.00 **C**=16g, $8.00
D=48g, $13.00

4615SM Sweet Marjoram *Origanum majorana* (80-95 days) Grown as an annual in the North. 1' plant with grey-green rounded leaves of enchanting sweet fragrance. Cut often to prevent flowering. Use fresh or dried. Adds flavor to soups, stews and stuffings. Subject to damping off; do not overwater. Likes well-drained dry soil. ~4,000 seeds/g. ④
A=0.5g, $1.90 **B**=2g, $4.00 **C**=8g, $7.00 **D**=32g, $17.00

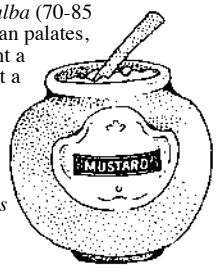
4619MO Marshmallow OG *Althaea officinalis* Cousin to the hollyhock, used to soothe and soften irritated skin and membranes and to relieve stuck hacking coughs. Also mildly stimulates white blood cell production and relieves urinary tract infections and prostate problems. Harvest root of this 4–6' showy perennial in autumn of the third year. Meanwhile, enjoy the attractive flowers through the summer or eat the velvety leaves in salads. All mallows contain soothing mucilage in the root, and marshmallow has the most, so it makes a great home-garden substitute for slippery elm. For tea, steep roots in cold water for several hours rather than boiling. Plant in cool moist soil. Will self-sow. Zone 4. ~600 seeds/g. ①
A=0.4g, $1.80 **B**=1.2g, $4.00 **C**=6g, $9.50 **D**=24g, $20.00

4630TO Milk Thistle OG *Silybum marianum* Named for the bold white splashes on its glossy leaves, said to be from Mary's milk. Fast-growing 3–5' annual with leaves up to 8x24". Native to the Mediterranean. Use young leaves cooked or in spring salads; remove spines first! Flower stalk puts out large purple thistle flowers that were eaten like artichokes. Silymarin, found in the flowers and seeds, has been used to strengthen and regenerate liver tissue. Will self-sow; pull unwanted volunteers before they get big and prickly. May present a way to outwit raccoons: Chris Mazur of Apple River, IL, planted some around his sweet corn patch, and the coons ravaged the rest of his garden, but did not molest his corn. Likes dry soil, very tolerant of drought. ②
A=1g, $1.60 **B**=4g, $3.50 **C**=28g, $8.00
D=112g, $17.00



4640MO Motherwort OG *Leonurus cardiaca* Hardy perennial of the mint family grows 2–4' with dull green leaves having a pungent odor and rather bitter taste. Good bee plant. Pick flowering tops for tea or herbal tincture. Believed to strengthen the heart muscle and relieve nervous tension. Used by women during life transitions. Readily self-sows even in relatively poor soil; pull up unwanted first-year basal rosettes before they put out their spiky flower stalk the second year. Zone 3. ~1,200 seeds/g. ✿ ①
A=0.2g, $1.90 **B**=1g, $5.00 **C**=3g, $11.00 **D**=9g, $25.00

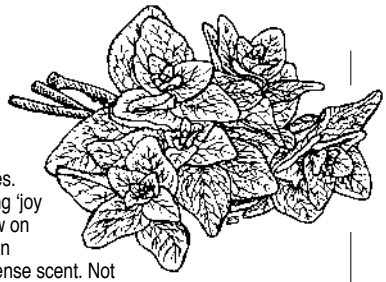
4642YM Yellow (White) Mustard Seed *Sinapis alba* (70-85 days) The variety of mustard most familiar to American palates, but pallid without the addition of turmeric. If you plant a scant dozen, they should yield enough to make at least a couple batches of prepared mustard. Or alternately, toast the seeds in a fry pan until they pop, and then grind into spicy mixtures. As easy to grow as the leafy mustards. Harvest seeds as soon as pods begin to turn tan. Pods open once the seeds are dry. Spice up those cold winter nights! Annual. *Cannot ship sizes C and D to the Willamette Valley*. ~145 seeds/g. ③
A=1.5g, $1.60 **B**=6g, $4.00 **C**=24g, $8.00
D=96g, $25.00



4644SO Stinging Nettle OG *Urtica dioica* Biodynamic gardeners use nettles to increase the potency of neighboring herbs, and to stimulate humus formation. An indicator of very fertile soil where it volunteers. Young shoots and leaves are delicious steamed as spring greens, very high in minerals and protein. Also makes a great hair rinse or dry chicken feed. Choose your spot carefully; the spreading rhizomes as well as the leaves can sting, and the plants will take over any patch of annuals. Cooking or drying removes the sting. Plant in damp rich soil with high nitrogen content; especially likes composted manure piles or the leaky side of your lushest compost bin. Chill the seed before sowing to improve germination. Takes 10–14 days to come up and grows 3–6'. Perennial. Zone 2. ~6,000 seeds/g. ①
A=0.2g, $1.90 **B**=0.6g, $3.50 **C**=2.4g, $8.00 **D**=7.2g, $16.00

Thank you. Always LOVE paging through your delightfully illustrated catalog! I can almost feel spring coming.
– Lisa Rosen, Montclair, NJ

Oregano



Origanum spp.

The oregano genus has more than 50 species. The ancient Greeks gave it its name, meaning 'joy of the mountains.' These fragrant plants grow on steep rocky alkaline hills, filling Mediterranean mountainsides with their joyful cheer and intense scent. Not only has oregano flavored foods for thousands of years, but it also has medicinal uses, from relieving rheumatism and asthma to decongesting stuffy head colds.

Culture: Likes sun and light well-drained alkaline soil. Will lose potency if soil is overfed. Harvest when it is beginning to flower.

4648GR Greek Oregano *O. heracleoticum* This is the true culinary herb for Greek and Italian cooking. Low-growing perennial with fragrant dull green and purple leaves and white flowers. Start indoors in spring for best results. Zone 4, but survives some winters in Zone 3. ~9,000 seeds/g. ②

A=0.2g, $2.10 **B**=1g, $4.00 **C**=5g, $7.00 **D**=20g, $22.00

4649ZO Zaatar Oregano OG *O. syriacum* This oregano carries a bit of zing and is a necessary ingredient in the condiment zaatar. Mix with sumac, toasted sesame seeds, salt and sometimes a few other herbs to make the sprightly topping so essential to Middle Eastern cuisine. Bushy tender perennial, hardy to Zone 10, grown as an annual in colder climes. For most aromatic flavor, harvest before its small white flowers appear. Start seeds indoors or sow them directly in the ground just prior to the last spring frost. ~4,650 seeds/g. ③

A=0.02g, $2.80 **B**=0.08g, $5.50 **C**=0.24g, $9.00 **D**=0.96g, $34.00

Parsley

Petroselinum crispum

~500-1100 seeds/oz. A shining star of Jason Kafka's wholesale program. He grows Double Curled, Krausa and Plain Leaf, moving a few hundred bunches per week and says that if you have the market, these may bring more $ per row foot than any other crop. When these hardy biennials bolt, he gets a bonus by using the umbels as filler for flower bouquets.

Culture: Very hardy. Parsley seed is short-lived; test old seed before sowing. Very slow to germinate (up to 30 days). Soaking seed 8–12 hours will hasten germination. Do not allow soil surface to dry out.

3158GI Gigante d'Italia (70 days) We were wowed by its early seedling vigor and rich sweet flavor. Flat-leaved heirloom hails from northern Italy and grows to 1'. ❄ ④

A=1/16oz, $1.50 **B**=1/8oz, $2.00 **C**=1/2oz, $3.00 **D**=1oz, $4.00
E=4oz, $7.50 **K**=1lb, $21.00

3166FG Double Curled (75 days) Double-curled with long upright stiff stems. Holds color well all season, tolerates heat and repeated cuttings. Gene and Joanna plant huge amounts for parsley pesto. ❄ ③

A=1/16oz, $1.40 **B**=1/8oz, $2.00 **C**=1/2oz, $3.00 **D**=1oz, $4.00
E=4oz, $8.00 **K**=1lb, $22.00

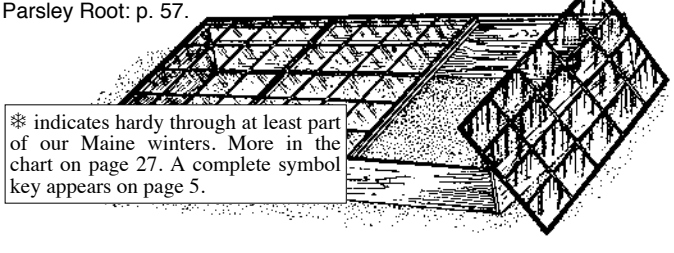
3169KO Krausa OG (75 days) "Krausa parsley gave us another stellar performance last year," reported Bryan O'Hara in CT. "Great flavor, too," added Evelyn Durand of Marysville, CA. Stems so sweet they taste almost like a miniature celery: thick, solid, crunchy, yummy. Dense triple-curled medium-green parsley holds its color without developing white or brown spots. Taller, thicker stems than Double Curled. "Never before had a parsley with such delicious stems," raves trialer Donna Dyrek. Can stand the heat yet still beautiful and juicy in October. ❄ ④

A=1/16oz, $3.40 **B**=1/8oz, $6.00 **C**=1/2oz, $18.00 **D**=1oz, $32.00

3170DO Plain Leaf OG (78 days) Smooth and shiny large wide dark green flat leaves. Upright with vigorous growth. We've called it Dark Green Italian for years. This is the same cultivar. ❄ ③

A=1/16oz, $1.90 **B**=1/8oz, $3.30 **C**=1/2oz, $5.00 **D**=1oz, $8.00
E=4oz, $22.00 **K**=1lb, $70.00

Parsley Root: p. 57.



❄ indicates hardy through at least part of our Maine winters. More in the chart on page 27. A complete symbol key appears on page 5.

4651PR Pennyroyal *Mentha pulegium* Native to Europe, across the Mediterranean into Persia. Hardy aromatic ground cover notorious for its insect-repellent properties: can be used to ward off mosquitoes and to repel fleas from pets. Makes a potent tea. Pennyroyal's distilled oil can be toxic, but the tea rinse is safe for external use. *Caution: Pregnant women should not use.* Plant 6" apart to make a dense mat. The plants creep with only the lavender flower stalks rising above the ground. Perennial in the mint genus likes rich well-drained soil with good moisture. Mulch for winter protection in Zones 4 and 5. ~12,000 seeds/g. ②

A=0.2g, $1.80 **B**=0.6g, $4.30
C=1.8g, $8.00 **D**=5.4g, $16.00

4657RO Rosemary OG *Rosmarinus officinalis* From the Latin *ros marinus* meaning 'dew of the sea,' a reference to its native habitat, the Mediterranean coasts. Beloved tender perennial growing to 3–4'. Cannot withstand temperatures below 17°, may be overwintered indoors if kept cool and moist. Try near a cool basement window and keep misted. Dark grey-green needle-like leaves impart a robust resiny flavor. Rosemary clippings are said to repel slugs. Blossoms range from deep blue to pale pink. Likes dry alkaline soil; peat pots are too acidic. Not a good germinator—30% is average. Zone 8. ~800 seeds/g. ③

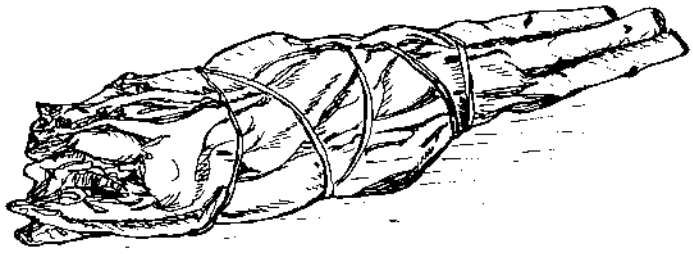
A=0.2g, $3.60 **B**=0.6g, $9.00
C=1.8g, $20.00 **D**=7.2g, $70.00

4664BS Broadleaf Sage *Salvia officinalis* Grows up to 3', with fuzzy grey-green oblong leaves and blue flowers. Used fresh or dried. Tasty in stuffing blends, with eggs, cheese, poultry, pork. Sage tea dries up mothers' milk and helps reduce hot flashes. Likes well-drained rich soil with good nitrogen content. Perennial plants grow woody with age; replace every 3 years or so. Zone 4, but only one of our five plants survived the harsh winter of 2003–4. Did not mind the tough 2014-15 winter. ~125 seeds/g. ✿ ④

A=1g, $2.00 **B**=4g, $4.00
C=16g, $8.00 **D**=48g, $18.00

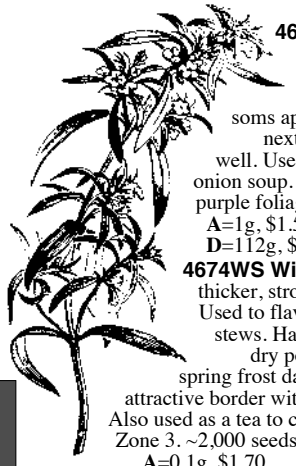
4666WS White Sage *S. apiana* An important ceremonial herb for Native Americans who use it for purification. Leaves can be smoked, taken as a tea, or used for smudge sticks and in sweat lodges. Over-harvested in some areas: consider growing your own. Bushy plant has thick stems and dusty grey-green foliage. A good bee plant. Perennial in Zone 6, not nearly as hardy as common sage; needs heavy protection to overwinter in our climate. ~700 seeds/g. ✿ ②

A=0.05g, $2.20 **B**=0.2g, $6.00 **C**=1g, $8.00 **D**=5g, $20.00



Supplier Codes Know where your seed comes from! See page 5 for details.
① Small seed farmers including Fedco staff.
② Family-owned companies or cooperatives, domestic and foreign.
③ Domestic and foreign corporations not part of a larger conglomerate.
④ Multinationals not to our knowledge engaged in genetic engineering.
⑤ Multinationals who are engaged in genetic engineering.
⑥ Syngenta, manufacturer of neonicotinoids.

Statements about medicinal use of plants have not been evaluated by the FDA, and should not be used for the diagnosis, treatment, cure or prevention of any ailment. Before using or ingesting any medicinal plant, consult a healthcare practitioner familiar with botanical medicine.



4672SS Summer Savory *Satureja hortensis* (70 days) Annual grows to 1½' with narrow dark green leaves and lavender flowers. Cut often during growing season, before blossoms appear. Sow after last frost in well-drained soil next to beans, their complement in the kitchen as well. Use with dry or green beans, rice, stuffings, or in onion soup. Left to bloom, it is beautiful in fall with dark purple foliage and lavender flowers. ~1,700 seeds/g.
A=1g, $1.50 **B**=14g, $4.00 **C**=56g, $8.00 **D**=112g, $12.00

4674WS Winter Savory *S. montana* Leaves shinier and thicker, stronger and more pungent than summer savory. Used to flavor dry beans or sauerkraut, winter soups and stews. Hardy bushy perennial grows 6–12", thriving in dry poor soil. Start indoors 8–10 weeks before last spring frost date; transplant after danger of frost. Makes an attractive border with its tiny green leaves and light lilac flowers. Also used as a tea to calm indigestion or as a gargle for sore throat. Zone 3. ~2,000 seeds/g.
A=0.1g, $1.70 **B**=0.4g, $3.70 **C**=2.4g, $7.00 **D**=9.6g, $13.00

4677SH Schisandra *S. chinensis* Also called Magnolia Vine. Highly ornamental deciduous woody vine, to 25', with tiny pinkish-white flowers that produce clusters of aromatic red berries in late summer. Called *wu wei zi* in China, meaning 'five-flavor fruit,' combining sweet, sour, bitter, salty and spicy. Can be eaten raw, cooked, dried, tinctured or made into wine. Traditionally used to treat asthmatic and other chronic coughs, insomnia and palpitations, schisandra is also adaptogenic, anti-inflammatory and immune enhancing. A wonderful choice for the permaculture garden. Dioecious; male and female plants are needed for fruit production. Stratify seed in sphagnum moss for 3–4 months before starting in early spring. Grows well on a trellis but will climb most anything. Prefers well-drained soil in full to dappled shade. Perennial, Zone 4. Sold by seed count. ~45 seeds/g. ②
A=10 seeds, $2.70 **B**=40 seeds, $8.00 **C**=160 seeds, $22.00

Shiso *Perilla frutescens* See p. 33.

4681BS Baikal Skullcap *Scutellaria baicalensis* Beautiful little perennial with myriad small violet monkshood-shaped blooms on a 1–2' subshrub. Looks like a shiny rosemary with slender ovate leaves. A definite candidate for the rock garden, it tolerates drought and grows best in light well-drained soil. Important as the Chinese herb *huang qin*, 3–4 year roots are dried and used as a bitter cooling sedative that lowers fever, blood pressure and cholesterol levels while stimulating the liver; also used to stop bleeding. To encourage the roots' optimal medicinal powers, pinch buds and don't let flowers bloom. Zone 4. ~250 seeds/g. ✿
A=0.1g, $4.00 **B**=0.3g, $10.00 **C**=1.2g, $32.00

4682KO Skullcap OG *S. lateriflora* Native spreading 1–2' perennial, also known as Virginia Skullcap, needs moist rich soil and likes partial shade. Herbalists use it as a headache remedy, great for insomnia and both calms and strengthens the nervous system. Flowering tops of skullcap are used in daily teas as well as formulas for chronic conditions. Sometimes called Mad-dog because the tea was once used as a folk remedy for rabies. Enjoy its numerous small blue flowers from July through September or put the leaves in a pillow to induce restful sleep. Hardy to Zone 4. ~500 seeds/g. ①
A=0.05g, $2.50 **B**=0.2g, $7.50 **C**=0.8g, $25.00 **D**=2.4g, $42.00

Spilanthes OG *Acmella oleracea* Not available in 2019.

4684ST Stevia *S. rebaudiana* (100-120 days) As sweet as it gets, stevia is several hundred times sweeter than sugar, but without the calories. It is used fresh, dried, powdered or in a liquid as a sugar substitute. Stevia grows into a bushy 2' plant with serrated leaves and white flowers in late summer. Pinch it back for greater bushiness and higher yields. An erratic and finicky germinator, the seed needs light. Likes heat so should not be transplanted outdoors until nights stay above 50°. Work compost into well-drained soil or raised beds. Perennial in Zone 9, so treat as an annual or bring indoors in a container. Ironically, it retards plaque and inhibits tooth decay. Seed has short longevity; order only a 1-year supply. ~3,100 seeds/g. ③
A=25 seeds, $2.70 **B**=100 seeds, $8.00 **C**=500 seeds, $30.00

4686TS Topas St Johnswort *Hypericum perforatum* Pretty yellow flower of fields and meadows turns tinctures and oils deep red. Used as tea, tincture or infused oil for many nerve disorders, from neuralgia and sciatica to mild depression, seasonal affective disorder and chronic exhaustion. The infused oil is also cooling to sunburn and cuts, soothing to strained joints and muscles. Frequent use can cause photosensitivity. Compared to generic St Johnswort, Topas is an improved strain for commercial production, much earlier (blossomed first year from seed), more floriferous with a higher content of hypericin. Seedlings grow slowly. Prefers well-drained dry soil; very drought tolerant but essential oil levels increase with some moisture. 1–3' perennial hardy to Zone 3. *We cannot ship to North Dakota or California where it is considered a noxious weed.* ~7,000 seeds/g. ③
A=0.1g, $1.70 **B**=0.5g, $4.50 **C**=2g, $8.00 **D**=8g, $19.00

4687GT German Thyme *Thymus vulgaris* Creeping 10–12" mat-forming perennial brings depth of flavor to soups, gravies, casseroles. Said to calm the nerves, soothe headaches. As good in salad dressings as it is in sore-throat remedies. Bees love its short lavender flower spikes. Likes well-drained light dry alkaline soil. Its fine root system makes thyme difficult to move around the garden. Hardy to Zone 4. ~4,000 seeds/g. ✿ ②

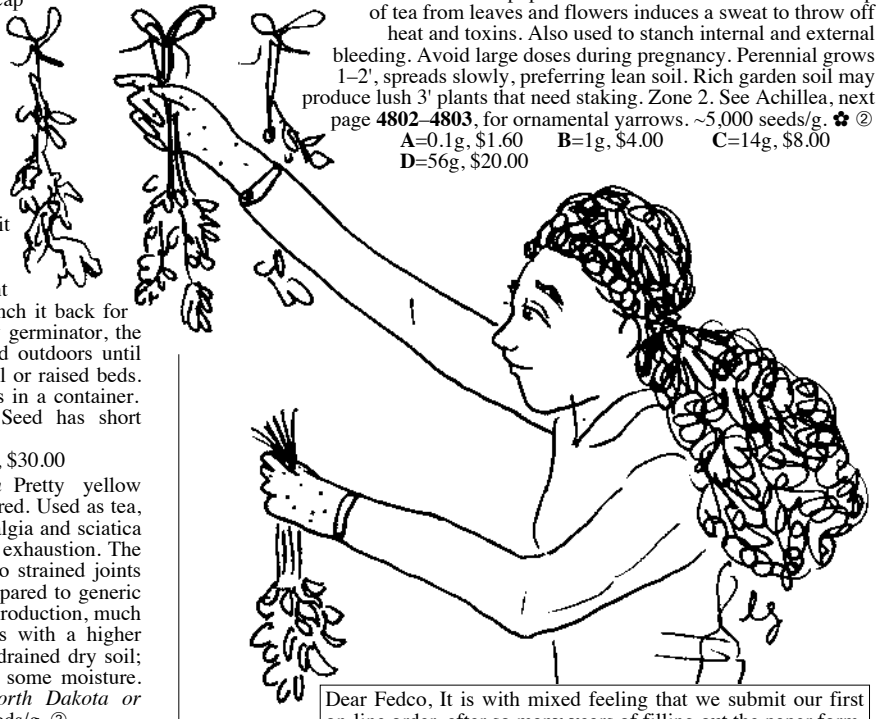
A=0.2g, $1.90 **B**=3g, $5.00 **C**=15g, $9.00 **D**=45g, $19.00

4690VO Valerian OG *Valeriana officinalis* Known as Nature's Tranquilizer or Herbal Valium, valerian root is used to reduce tension and anxiety, alleviate insomnia, and relieve muscle spasms and cramping. Avoid high doses for prolonged periods. Harvest roots in the fall of the second or later year. Early Greeks referred to valerian as *phu* (like our "phew") because of the distinctive fetid musky smell of the roots, but locally called Garden Heliotrope for the wonderful fragrance of its flowers. Tall leafy 3–5' perennial with clusters of honey-scented pale pink flowers. Remove flowers to hasten root development. Plant in moist fertile soil about 1' apart. Zone 3. ~800 seeds/g. ③
A=0.1g, $2.40 **B**=0.6g, $5.00 **C**=2.4g, $8.00 **D**=7.2g, $15.00

4692BO Blue Vervain OG *Verbena hastata* This 5–6' perennial grows naturally in moist thickets and meadows and will do well in similar garden conditions, sending up many terminal spikes of bristly blue-violet flower clusters the entire season. Although scraggly, it blends very well with many kinds of flowers by stretching its spikes amongst them. Herbalist Gail Edwards finds it "a powerful spiritual presence" and nervous system tonic. Similar to *V. officinalis*, but more alterative, vervain acts mainly on the liver and lungs. Its roots are more active than its leaves. Likes light well-drained moist soil. Zone 3. ~2,500 seeds/g. ①
A=0.1g, $2.10 **B**=0.4g, $4.00 **C**=4g, $15.00 **D**=12g, $34.00

4698SW Sweet Woodruff *Galium odoratum* A lovely ground cover for shaded areas, its whorls of pointed leaves covered with clusters of tiny snowy-white spring flowers. Vanilla-scented leaves are essential in Maybowl, a traditional German punch, and also used in potpourris. Said to be helpful for migraine, nervous conditions and stomach pain. Drying increases its clover fragrance. A classic strewing herb in the Middle Ages used to purify the church, dining hall and bedrooms with its coumarin-rich fragrance. Sow outdoors in a woodland site or in a heavy layer of well-rotted leaf mulch. Can be very slow to germinate—up to 200 days—and then may not be visible right away because the plants grow by underground rhizomes. Be patient—woodruff will appear the following spring and grow 6–8" tall. Perennial, Zone 5. ~160 seeds/g. ②
A=0.2g, $2.20 **B**=0.6g, $4.50 **C**=2.4g, $8.00 **D**=7.2g, $17.00

4699WY White Yarrow *Achillea millefolium* Flat-topped white flowers bloom June–August with an odd alluring scent that attracts bees, butterflies and beneficials. One of the most popular herbs for colds and flu. A hot cup of tea from leaves and flowers induces a sweat to throw off heat and toxins. Also used to stanch internal and external bleeding. Avoid large doses during pregnancy. Perennial grows 1–2', spreads slowly, preferring lean soil. Rich garden soil may produce lush 3' plants that need staking. Zone 2. See Achillea, next page **4802–4803**, for ornamental yarrows. ~5,000 seeds/g. ✿ ②
A=0.1g, $1.60 **B**=1g, $4.00 **C**=14g, $8.00 **D**=56g, $20.00



Dear Fedco, It is with mixed feeling that we submit our first on-line order, after so many years of filling out the paper form. I love the catalog and all the art. But this is, I admit, easier.
– Kim Allshouse, Moretown, VT

FLOWERS

Flowers are arranged here alphabetically mostly by common name. For **Dye plants** see **p. 101**. **See chart on pp. 102-103 for cultural information and common uses. Botanical index is on p. 77.** Days in parentheses after a variety indicate days to first bloom. What to plant next to what? A good trick is to cut a flower and walk it around the garden, holding it close to other flowers to see which combinations are most compatible.

All flowers open-pollinated unless noted.

MIXES

5804BO Beneficials Mix OG Frank Morton teaches that "when you increase the diversity of an ecosystem you enhance its ability to maintain itself and to resist perturbation." One way to attract and maintain a diverse population of beneficial insects and pollinators is to sow this mix of annuals, biennials and perennials. Instead of resorting to toxic sprays, invite hover flies, ladybugs, lacewings, parasitic wasps, tachnids, spiders, minute pirate bugs, damsel flies and big-eyed bugs and let them devour the "bad" bugs! Something in the mix will be blooming from spring through fall. Addressing concern over neonicotinoids and their deleterious effects on pollinators, we have redesigned our beneficials mix to contain only organic seed, ensuring that no neonicotinoids were used in seed prep, plant growth or after-harvest treatment. Consisting of anise hyssop, bee balm, borage, calendula, california poppy, cilantro, dill, fennel, mustard, parsley and phacelia, this mix will be sure to please a diverse abundance of insect helpers. Should any variety become unavailable we will substitute one with similar efficacy. Sow in spring as a hedgerow in a well-prepared weed-free seedbed close to the garden in full sun. ①③④ ✿

A=1.4g, $2.70 **B**=7g, $9.00 **C**=28g, $25.00 **D**=112g, $80.00

5807CT Cutflower Mix A mixture of annual flowers that can be used for cutting. Includes popular types such as aster, bachelor's button, calendula, cosmos, zinnia; also some lesser-known kinds. ①–⑤ ✿

A=1g, $1.80 **B**=14g, $5.50 **C**=56g, $16.00 **D**=224g, $58.00

5809WF Wildflower Mix for the Northeast. A blend of 19 perennial and self-sowing annual species native to or naturalized in northeast U.S. and Canada. Includes black-eyed Susan, New England aster, blazing stars, sweet William, shasta daisy, bachelor's button, echinacea and scarlet flax. Broadcast in spring or fall in a well-prepared weed-free seedbed in a sunny spot. Seed at a rate of 1 lb/4500 sq ft. ~2,143 seeds/g. ✿ ②

A=1.4g, $1.70 **B**=7g, $3.50 **C**=28g, $7.50 **D**=1lb, $40.00

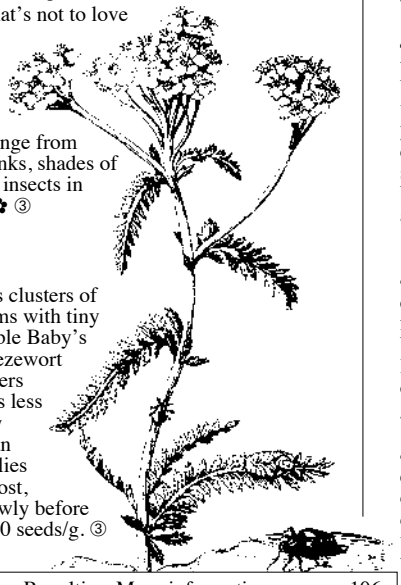
ACHILLEA *Achillea* spp.

Perennial, Zones 3-10. Named for Achilles, who used it to stanch battle wounds. We recommend White Yarrow (previous page) for medicinal use. Likes full sun and good drainage. Avoid rich soils. Cut back spent blossoms to encourage another bloom.

4802CQ Cerise Queen *A. millefolium* Also known as Pink Yarrow. Easy to grow and tolerant of drought, heat and poor soil. Beautiful cherry-red flat flower heads 2–4" across on 18" stems with lacy foliage. A good border plant that feeds many beneficial insects. Needs light to germinate. Start indoors and transplant out. ~6,200 seeds/g. ✿ ③

A=0.1g, $1.90 **B**=0.5g, $4.50 **C**=3g, $15.00

4803SP Summer Pastels *A. m.* What's not to love about a yarrow? Easy to care for, long lived and long blooming, good in drought and beautiful, with a full range of soft pastel colors to light up any empty spaces in your sunny garden. This AAS winner covers the range from creamy yellow to gold, light to deep pinks, shades of lilac, red and white. Support beneficial insects in your garden. 18–24". ~6,000 seeds/g. ✿ ③



A=0.05g, $2.60
B=0.15g, $6.00
C=0.6g, $13.00

4804PL The Pearl *A. ptarmica* Bears clusters of fully double small white pompon blooms with tiny yellow centers, almost like a large double Baby's Breath. Though its common name Sneezewort would lead one to believe that the flowers induce excessive sneezing, actually it is less allergenic than common yarrow. Easily cultivated, spreads readily and makes an effective "wild" border, 2–3' tall. Supplies copious cutflowers from spring until frost, enjoyable either fresh or dried. Dry slowly before the oldest blooms start to brown. ~7,000 seeds/g. ③

A=0.05g, $1.50
B=0.15g, $2.50
C=0.6g, $3.30

IR = Indigenous Royalties. More information on page 106. A complete symbol key appears on page 5.

AGERATUM *A. houstonianum*

Annual. Its name means 'not growing old' as the flowers retain color for a long time. Also known as Flossflower. Covered with blossoms, great for summer borders.

Culture: Start indoors at 80˚ for 6–8 weeks before last frost; grow on at 60–65˚. Set 9–12" apart. Likes full sun. Water in hot weather. Extreme temperatures inhibit flowering. Will not tolerate frost. Cut for vase when flowers are first opening. **~7,000 seeds/g.**

4811DB Dondo Blue (40 days from transplanting) A cutting ageratum with long stems. Blooms held nicely through a rainy summer, all the way from July 20 to an Oct. 5 killing frost. ③

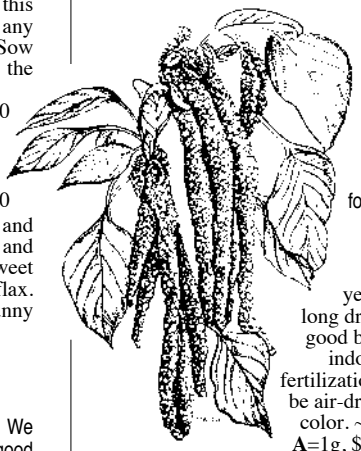
A=0.1g, $1.90 **B**=0.5g, $4.00 **C**=2g, $7.00

4815RF Red Flint (60 days) Dense fuzzy heads are beautiful, standing on sturdy 2' stems and catching the fading summer's light. The color isn't quite red: more of a purplish-red. They make a good cut, and can be dried as well, retaining their color. ~7,500 seeds/g. ③

A=0.1g, $1.90 **B**=0.5g, $4.00 **C**=2g, $7.00

4821CS Carpet of Snow Alyssum *Lobularia maritima* (60 days) Annual. Free-flowering ground cover, blossoming from late spring well into fall with a fragrance like fresh-mown hay. Cascading habit makes it excellent for windowboxes or terrace edges. 4" dwarf white. Formerly known as Little Gem, predates 1890. Widely recognized nectar source for beneficial insects. Start seed in cool place 6 weeks before setting out. Needs light to germinate. Transplant seedlings 4–8" apart. Easy to grow, likes sun, tolerates some shade. To extend their season, shear plants halfway back four weeks after bloom. Resistant to frost, will tolerate temperatures below 25˚. ~3,200 seeds/g. ✿ ②

A=0.5g, $1.60 **B**=7g, $3.50 **C**=28g, $4.80 **D**=84g, $11.00



AMARANTH *Amaranthus* spp.

Annual. A dual-purpose crop, both nutritious and decorative. From the Greek *amarantos* for 'unfading.' Used as an ornamental, especially in harvest arrangements. Amaranth was an extremely important food of the Aztecs. **~1,250 seeds/g.** Also see grain amaranth on pg 26, and amaranth for greens on pg 29.

4831LL Love-Lies-Bleeding *A. caudatus* (90 days) Also known as Tassel Flower. Well loved by cottage gardeners for more than 300 years. This vigorous 2–4' branching annual sports long drooping red tassels that hold until frost. Makes a good border; stake and tie for neater appearance. Start indoors at 70–75˚, grow on at 62–65˚. Avoid heavy fertilization. Space at least 1' apart for strong stems. May be air-dried by hanging upside down; use heat for better color. ~1,500 seeds/g. ③

A=1g, $1.60 **B**=7g, $4.00 **C**=28g, $8.00

4832HO Hot Biscuits OG *A. cruentus* (65-75 days) Flaunts glorious 2' chestnut-bronze to copper-colored well-branched seedheads atop its majestic 4' stalks at maturity. Pinch back to facilitate branching. Wonderful decorative complement to the red amaranths, used as a garden backdrop or to give harvest arrangements a bright earthy autumnal color. Easy to grow. Also an underused food plant both for its seeds and its young leaves, though the seeds may require too long to mature in our climate. Replaces Copperhead, which was starting to exhibit red off-types. ① **NEW!**

A=0.2g, $2.00 **B**=0.6g, $3.60 **C**=1.8g, $8.00 **D**=9g, $24.00

4835HO Hopi Red Dye OG *A. c.* (46 days) A stately 6' plant, Hopi was the best of the nine red amaranths we compared, displaying 1–2' deep burgundy inflorescences. Leaves may be green or burgundy or some variation. Eat the young leaves in salads or slightly steamed, admire them young or old. The Hopis make a scarlet food dye from the flower bracts to color their ceremonial *piki* bread. Yanna Fishman of Union Mills, NC, suggests using Hopi in your floral arrangements. "When added to a flower bouquet it makes an ordinary clear jar look like an elegant purple-tinted vase as it colors the water." IR ①

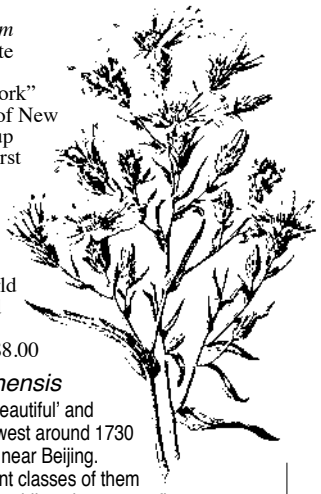
A=1/16oz, $2.00 **B**=1/8oz, $3.50 **C**=1/2oz, $7.00 **D**=1oz, $11.00
E=4oz, $38.00

4836CV Carnival *A. gangeticus* (72 days) This gaudy amaranth fooled me early in the summer with its respectable robe of mahogany, green and bronze foliage swirled on an upright 3–4' central stalk. But at maturity, Carnival brings the party. Promiscuous whorls of hot pink foliage top every branch leader, transforming this matron into a diva, nearly 6' tall. Pinch back the central leader at 2' for a fuller, bushier habit. Psychedelic accent to any gaudy display. ③

A=0.2g, $2.10 **B**=0.6g, $3.50 **C**=1.8g, $8.00 **D**=9g, $23.00

4837EO Elephant Head OG *A. g.* (90 days) Tune out the politicians and elect this garden Elephant Head instead for its more amusing flair for the dramatic. The 110-year-old heirloom with deep reddish-maroon blooms develops a 6–12" vertical "trunk" atop a 12–18" base during August. The whole spectacular plant grows 3–5'. Seed from German immigrants saved by three generations of gardeners in Idaho, popularized by Seeds of Change. ①

A=0.1g, $1.90 **B**=0.3g, $3.50 **C**=1.2g, $7.70 **D**=6g, $22.00



4849NH New Hybrids Aster *Symphyotrichum novi-belgii* Perennial, Zones 4-8. A good antidote when summer flowers fade and the late-season doldrums hit your garden. These hardy "New York" (the species name dates back to when the State of New York was known as New Belgium) asters pick up right where the others leave off, blooming the first year in a range of colors from red to purple and bluish to white in sequence from August to November. Because this is a mix of various hybrids and each type, in turn, blooms for several weeks, it makes a continuous long-lived show of color on the 4' plants. All the New World asters have been taken from the *Aster* genus and renamed *Symphyotrichum*. ~1,700 seeds/g. ⑤
A=0.05g, $2.10 **B**=0.2g, $4.00 **C**=1g, $8.00

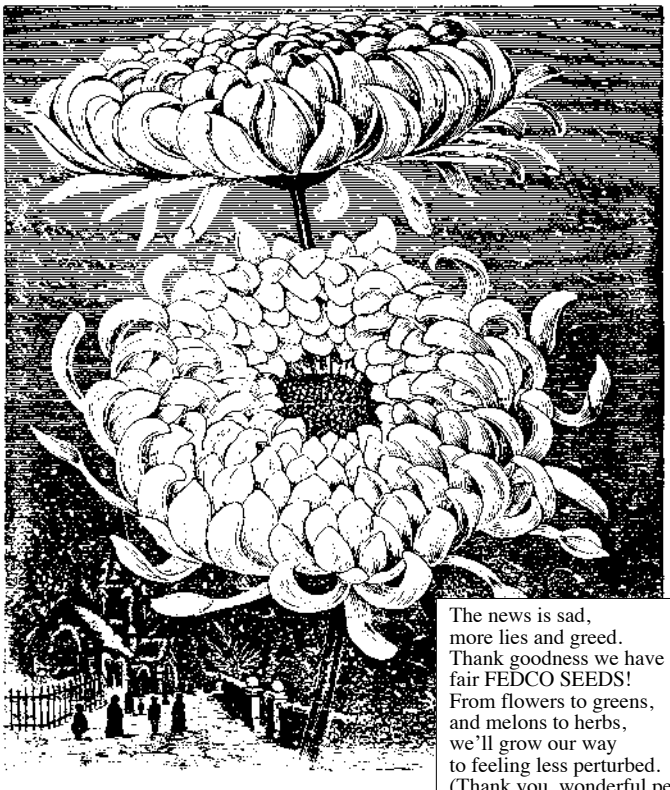
CHINA ASTER *Callistephus chinensis*

Annual. Callistephus is from Greek *kallos* meaning 'beautiful' and *stephos*, 'crown.' The China Aster began its journey west around 1730 when a Jesuit missionary noticed it growing in a field near Beijing. Wildly popular by 1883 when Burpee listed 19 different classes of them compared to two each of marigold and zinnia. Good bedding plants or cutflowers.
Culture: Sow indoors at 70–72° in late winter, transplant after danger of frost. Cut stems when 2–4 flowers have opened. Vase life is 5–7 days. Aster Yellows is a serious disease problem. Use floating row covers (**8874**) to keep out leafhoppers, the vector. **~450 seeds/g.**

4852CO Crego Mix OG (90 days) Bold ostrich-feather blooms on 2' plants make a shaggy late-season appearance with 4" flowers in violet, lavender, pink, rose, fuchsia and white. This fall-blooming beauty holds well in wet or cold conditions, providing a bit of late-season color in the garden or bouquets. The common name of aster comes from the Greek *astron*, meaning star, a reference to their shape and bright colors. Maule in 1915 asserted that they "surpass in size and beauty any other aster we have ever seen." "Pleasing, stately, handsome and vigorous," concluded H.W. Buckbee in 1927. The grower calls them "stunning." ①
A=0.5g, $1.70 **B**=4g, $3.50 **C**=16g, $6.00

4854MM Matsumoto Mix (100 days) A very classy cutflower that may be harvested by the individual stem or in its entirety. Flowers sport distinct yellow centers amidst a variety of shades including apricot, blue, pink, red, rose, salmon and white. 2" semi-double blooms are concentrated at the top of strong 2½' stems. ③
A=0.2g, $2.50 **B**=3g, $9.00 **C**=9g, $22.00

4857PR Princess Mix (110 days) 2–3" flowers on long wiry stems. The pompon blooms with deeply crested centers are richly colored in shades of purple, salmon, magenta, rose and lavender. These elegant cutflowers tend to be late bloomers. Unsurpassed in September. ③
A=0.25g, $1.90 **B**=2g, $4.00 **C**=8g, $7.80



The news is sad,
more lies and greed.
Thank goodness we have
fair FEDCO SEEDS!
From flowers to greens,
and melons to herbs,
we'll grow our way
to feeling less perturbed.
(Thank you, wonderful people!)
– Katie Chriest, Erie, PA

4861BB Single Alba Baby's Breath *Gypsophila paniculata* Perennial, Zones 4-8. Lovely as a border plant in masses, bearing many tiny single white flowers. Great filler for bouquets. Useful as an everlasting if cut before fully opened. May be sown direct; do not cover. Likes well-drained soil. Grows to 3'. ~1,270 seeds/g. ③
A=0.7g, $1.80 **B**=7g, $4.00 **C**=21g, $9.00

BACHELOR'S BUTTON *Centaurea cyanus*

Annual. Named for the centaurs of Greek mythology. Easy to grow, great for cutflowers and beds. Common name may refer to the tight unopened buds' resemblance to buttons or to their popularity as boutonnieres. Also known as Cornflower and, formerly, Hurt-Sickle because its wiry stems dulled many a sickle during mowing time.
Culture: Start indoors at 60–65° 2 months before setting out, or direct seed in May in a sunny location. Deadhead for persistent blooms, or make a succession planting in mid-late June if you desire late-summer flowering. Will self-sow. Lasts longer than most flowers after frost. Excellent drought resistance. Cut when flowers are just beginning to open—they'll open more in the vase and last 6–10 days. 3'.
~210 seeds/g. *Cannot ship to Alaska.*

4871BL Blue Boy (90 days) Showy blue. ②
A=1g, $1.70 **B**=28g, $4.00 **C**=112g, $9.00
D=1lb, $23.00

4873FR Frosty Mix (96 days) Dark centers featuring maroons and purples fade into white outer petals, creating a frosted effect. Bloomed 4 weeks after a May 2 transplanting at Loon Song Farm. ③
A=1g, $1.80 **B**=7g, $4.00 **C**=28g, $9.00
D=112g, $22.00

4875BG Black Gem or **Garnet** (90 days) Ruffled dark maroon. Dates from Buist's 1942 catalog. Hard to find. ③
A=0.25g, $2.00 **B**=1g, $3.60 **C**=4g, $6.80
D=12g, $11.00

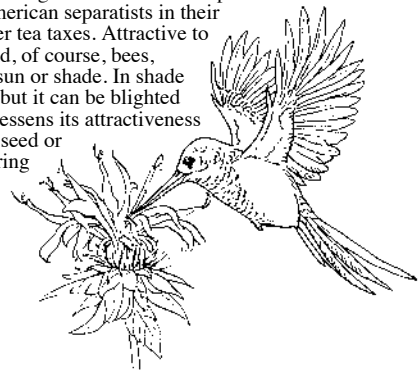
4877RB Red Boy (90 days) Deep red. Dates from 1942. ②③
A=1g, $1.70 **B**=7g, $4.00 **C**=28g, $6.50
D=1lb, $70.00

4879BM Mix (90 days) We have recently noticed a decline in the quality of the mix and so are creating a custom blend in order to ensure the full range of colors: pink, red, and white with blue predominating. ②
A=1g, $1.70 **B**=28g, $4.00 **C**=112g, $6.60 **D**=1lb, $20.00

4881BF Florist Blue Balloon Flower *Platycodon grandiflorus* Perennial, Zones 3-8. Developed specifically for the cutflower trade, this 2½–3½' cultivar bears long-lasting deep blue rounded star-shaped flowers from June to August. Called Balloon Flower because the buds look like inflated balloons ready to burst. Slow to emerge in spring; needs some support once it does. Plant in sun to light shade, 12–18" apart. Taproot can make it tricky to transplant. Avoid wet soil where it will not thrive. ~1,100 seeds/g. ③
A=0.1g, $1.80 **B**=0.4g, $4.00 **C**=2g, $7.00

4883CB Double Camellia Mix Balsam *Impatiens balsamina* Annual. Balsam reigned supreme during the Victorian era when it was called Lady Slippers. Vick's in 1895 averred "no plant will give more in return for the care bestowed upon it and none is more frequently neglected," recommending spacing at least 1' apart, aiming for a wide diameter at the base and a pyramid shape covered with flowers. A different school suggests pinching off the side branches and the first flowers to encourage a profusion of blooms near the top of the plant giving the effect of a ready-made bouquet. Both agree that wide spacing is important to make the most of Balsam's novel show of abundant pink, rose and white rosettes along the axils up its stems. Direct seed after danger of frost. Don't cover the seed. 2'. ~120 seeds/g. ③
A=1g, $1.60 **B**=7g, $3.50 **C**=28g, $6.20

4886BM Panorama Red Bee Balm *Monarda didyma* Perennial, Zones 4-9. The original true-red shade returns in all its glory after leaving the market for several years while the breeder retooled. Gardeners will be thrilled as this used to be our best-selling perennial and a stable red bee balm from seed is hard to come by. Bushy clumping 30" Panorama bears 1–2 whorls of red tubular flowers on each stem from mid to late summer. Also known as Oswego Tea: the Oswego Indians used the species for tea as did the colonial American separatists in their struggles with the British over tea taxes. Attractive to butterflies, hummingbirds and, of course, bees, Monarda can grow in either sun or shade. In shade its bloom time is lengthened but it can be blighted by powdery mildew (which lessens its attractiveness but not its longevity). Direct seed or transplant, surface sow in spring or summer, takes 14 days to germinate. ~2,000 seeds/g.
✿ ② **BACK!**
A=50 seeds, $2.00
B=200 seeds, $6.00
C=500 seeds, $13.00



4889NB Nonstop Tuberous Begonia
B. x *tuberhybrida* (140 days) F-1 hybrid. Perennial in Zone 10, grown as an annual. A boisterous mix of flamboyant color to awaken your garden. Nine shades, from pink to fiery red, apricot to golden orange, plus yellow and white, create a riot of color in a shady garden border or in hanging pots. Europe's #1 windowbox plant sports showy 3½–4½" fully double blooms on vigorous basal-branching stems. Begonias like shade, moisture, very rich soil, will tolerate a bit of sun. Start indoors, set out after all danger of frost. Needs 75° to germinate; takes 2–3 weeks. Pelleted seed. Packed by seed count, not weight. ②
A=10 seeds, $2.10 **B**=50 seeds, $6.00

4896BI Bells of Ireland *Moluccella laevis* (110 days) Annual, everlasting. Spikes of bright green bell-shaped "flowers" atop 2½' branching stems. Each green bell is really a showy inflated calyx with a tiny pinkish flower inside. When dried, bells turn creamy white. Likes partial shade; thrives in cool climates. Needs light to germinate. Will self-sow. ~140 seeds/g. ②
A=1g, $1.60 **B**=3g, $3.20 **C**=15g, $6.00

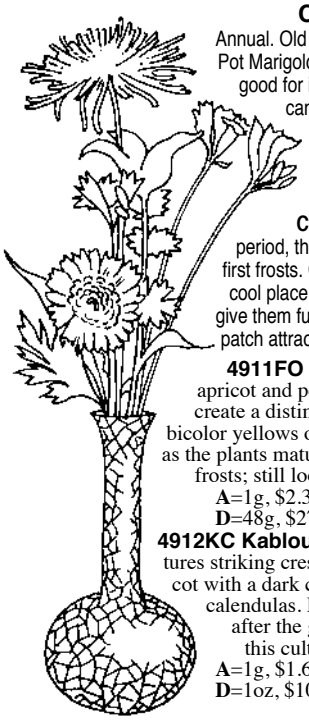
4899BS Blazing Stars *Liatris spicata* Perennial, Zones 3-9. Also known as Gayfeather. 18" spikes of rosy purple flowers for cutting, also excellent for drying. Harvest the stems in the morning when at least half the flowers are open. Start indoors in late winter in a cool place and set out in spring in 6–8 weeks or direct seed in spring. Takes 3–4 weeks to germinate. ~330 seeds/g. ✿ ②
A=2g, $1.90 **B**=6g, $4.00 **C**=18g, $9.00

Bouncing Bet has moved to the dye section (p. 101) as **5920** Soapwort.

4903BU Green Gold Bupleurum *B. rotundifolium* var *griffithii* (90 days) Annual. Though not well known outside of Dutch flower auctions where it commands a price similar to roses, this unique plant with yellowish flowers and round leaves is treasured by dried-flower growers. Its well-branched 2' stems air-dry perfectly, retaining their green color as if dried in glycerine. Because each stem fans out, an individual stem provides backdrop for an entire arrangement, either fresh or dried. Start indoors early to reach full growth potential. Will self sow in warmer areas. ~320 seeds/g. ③
A=0.2g, $1.80 **B**=0.6g, $4.00 **C**=6g, $7.00 **D**=30g, $20.00

4906BW Butterfly Weed *Asclepias tuberosa* Perennial, Zones 4-9. Also called Pleurisy Root. Native to North America and widely adapted, this bright sun-lover provides a bold splash of bright orange from June until frost. Vigorous mounded 2x2' plants bear broad 5" heads of waxy flowers attractive to butterflies and bees. Leaves are a food source for monarch butterfly larvae. Both the flowers and pointed seedpods are useful for cutflower arrangements. Native Americans used roots to combat lung and throat troubles and to soothe wounds and sores. Germinates in 3 weeks at 70°. Choose a permanent site with well-drained fertile sandy soil because its tuberous roots do not like to be disturbed. Direct sow in spring or fall, thinning to 18–24". Cut when at least half the flowers are open. Use caution when handling cut butterfly weed as sap can cause irritation. Slow to emerge in spring. Exceptionally drought-tolerant. ~200 seeds/g. ✿ ②
A=0.5g, $1.80 **B**=2g, $4.30 **C**=6g, $8.00

CALENDULA *C. officinalis*



Annual. Old kitchen garden flower, 18–20" tall, also known as Pot Marigold. Beautiful daisy-like flowers feed pollinators, are good for informal bouquets, and are also edible. Blossoms can be pinched from their stems, dried and added to soups, salads and stews. They are also used in homeopathic remedies, herbal tinctures and ointments for their antiseptic and soothing qualities.

Culture: Calendulas bloom over an extremely long period, thrive in cool weather and persist through autumn's first frosts. Can be direct seeded in May or started indoors in cool place for early blooms. Readily self-sows. Don't crowd, give them full sun. Deadhead to keep blooms coming and the patch attractive, or try succession plantings. **~150 seeds/g.**

4911FO Flashback OG (55 days) A mix of orange, apricot and peachy doubled petals, all with red backing to create a distinctive contrast. Colors fade to bicolor yellows or yellow-peach, adding interest as the plants mature. Blooms withstand light fall frosts; still look good in October. Ω ✿ ①
A=1g, $2.30 **B**=4g, $4.50 **C**=12g, $9.30
D=48g, $27.00

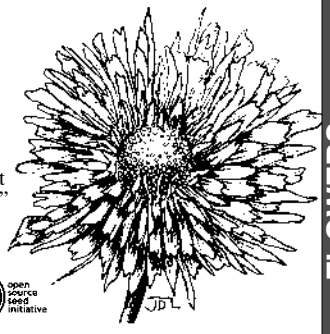
4912KC Kablouna Mix (60 days) Distinct refined form features striking crested blooms of gold, orange, lemon and apricot with a dark contrasting center. One of the loveliest of the calendulas. Kablouna, our seed room goddess who looks after the good fortune of seed packers, was named for this cultivar. ✿ ①
A=1g, $1.60 **B**=4g, $3.20 **C**=12g, $5.50
D=1oz, $10.00

4916MO Maya Orange OG A calendula with a different look. Its brick-orange petals are layered like shingles around the dark brown center giving the illusion of double blossoms, though they really are not. Good cuts to enliven summer bouquets. Donna Dyrek's began blooming on July 14. Readily self-sows. ✿ ③
A=1g, $2.30 **B**=4g, $5.00 **C**=12g, $12.00

4920PB Pacific Beauty Mix The classic lovely yellow and orange mix. Herbalists highly regard its healing gifts. ✿ ②
A=2g, $1.60 **B**=14g, $4.40 **C**=56g, $9.20 **D**=224g, $22.00

4925RO Resina OG (70 days) The best calendula for making tinctures and oils and the one Deb Soule grows at Avena Botanicals. Its medium-sized single blooms with small eyes are extremely resinous, coating your fingers or clippers while you harvest flowers. The medicinal sticky resins impart a pleasant odor. Blossoms are primarily bright yellow with yellow centers. A few will be orange with light orange centers. Cheery flowers, good medicine. ✿ ①
A=1g, $2.00 **B**=3g, $4.50
C=9g, $8.00 **D**=27g, $18.00

4927LO Solar Flashback Mix OG (55 days) A hot release from Frank Morton's calendula program. Morton, profiled on p. 33, describes it as "a distinctive new family of flash, selected to highlight contrast between bright light yellows, pinks, and solid red or maroon." Some feature yellow petals, some pinkish-blond, some yellow with light tips, all with contrasting red backs. Take a vacation from calendula orange. ☙2007. Ω ✿ ①
A=1g, $2.30 **B**=4g, $4.50
C=12g, $9.30 **D**=48g, $28.00

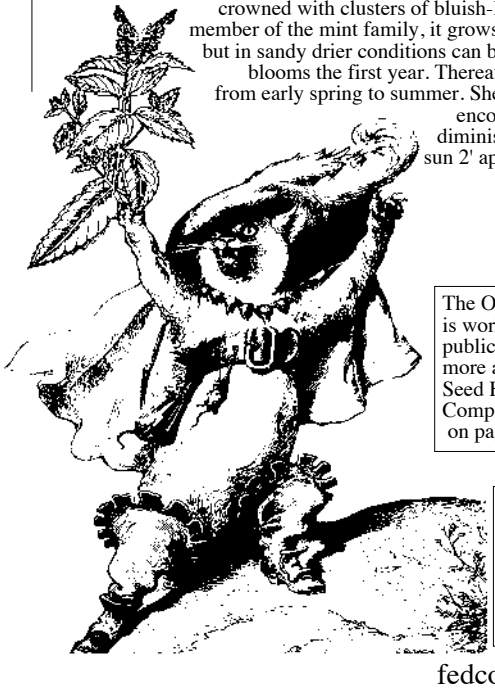


4929ZO Zeolights OG Pinky-maroon backing shows through the yellow petals to lend a pink tinge to the familiar calendula-yellow. Dark centers accentuate the color contrast. A Frank Morton original. Ω ✿ ①
A=1g, $2.40 **B**=4g, $4.40 **C**=12g, $10.00 **D**=48g, $30.00

4930BC Blue Clips Campanula *Campanula carpatica* Perennial, Zones 4-10. Also known as Bellflower or Carpathian Harebell. Masses of light azure bellflowers dance 8" high above a tidy mound of foliage up to 12" wide. Remarkable flower power at the front of the border and equally good in containers. Very hardy and easy to grow, Blue Clips will bloom in sun or partial shade from June to October as long as spent flowers are deadheaded. ~12,000 seeds/ g. ② **BACK!**
A=50 seeds, $3.00 **B**=200 seeds, $9.00 **C**=500 seeds, $18.00

4932CC Canary Creeper *Tropaeolum peregrinum* Annual. A climbing relative of the nasturtium. Profuse 8' vines with unique deeply lobed frog-toe–like foliage and clusters of lacy-petaled golden-yellow flowers from midsummer till frost. Gorgeous when grown on a sturdy tripod with **5277** (p. 94) Kniola's Purple morning glories and/or Scarlet Runner beans (p. 8). Grows in shade but prefers full sun. ~15 seeds/g. ③
A=1g, $1.70 **B**=7g, $5.20 **C**=28g, $13.00 **D**=112g, $35.00

4937PC Persian Catmint *Nepeta mussinii* Perennial, Zones 4-8. While we can't duplicate the lavender fields of Provence, we can create a similar look by planting catmint. Its soft grey-green leaves clothe wiry 1' stems crowned with clusters of bluish-lavender tubular flowers. A member of the mint family, it grows rapidly in rich moist soils, but in sandy drier conditions can be contained. Plant early for blooms the first year. Thereafter will flower for 6 weeks from early spring to summer. Shear plants after blooming to encourage repeat blooms and to diminish self-sowing. Plant in full sun 2' apart. ~1,200 seeds/g. ✿ ③
A=0.1g, $1.70
B=0.3g, $3.60
C=1.2g, $7.00
D=6g, $10.00



The Open Source Seed Initiative is working to keep seeds in the public domain. See page 107 for more about OSSI and the Four Seed Freedoms. Complete symbol key on page 5.

LOVE how you all reuse packaging when shipping stuff, thanks for cutting down on waste and being thrifty.
– Shannon Maes,
Tamworth, NH

CELOSIA *C. argentea*

Annual, good for fresh bouquets and everlasting arrangements. From the Greek *keleos*, 'blazing,' a reference to their brilliance. Commonly appear in three groups, *cristata* (crested, fancifully known as brains), *plumosa* (plumed) and *spicata* (with spikes or pointed). All share blazing colors, furry textures and unusual shapes. Known as *ji quan hua* in China where both seeds and flowers are used for blood diseases, bleeding and urinary tract infections.

Culture: From hot climates and at their best in hot dry weather. Should germinate within 10 days at 72–80˚.

4943CG Coral Gardens Cockscomb *C. a.* var. *cristata* An extra-dwarf brain-type growing fairly large flowers on compact 10" plants. Blooms display a rich mix of red, crimson, rose, orange and gold with an almost neon glow. *Includes some spectacular giant brain off-types of all colors*. Be prepared when people approach your annuals and ask, "Do you have any brains?" Sow indoors in peat pots 4 weeks before last frost. Too-early seeding and cold temperatures can cause premature flowering. Seedlings sensitive to both drying out and damping off; apply moisture evenly. Pinch off heads two weeks after transplanting to induce branching or leave one stalk for one larger bloom. ~1,200 seeds/g. ③

A=0.5g, $1.70 **B**=3g, $3.40 **C**=15g, $7.70

4948FF Forest Fire Cockscomb *C. a.* var. *plumosa* Plume-type celosia also known as Feather Amaranth shows bright scarlet flowers, with strikingly beautiful bronze-red foliage. 30–36". ~1,500 seeds/g. ②

A=0.2g, $1.70 **B**=3g, $3.60 **C**=12g, $6.00

4950RO Ruby Parfait OG *C. a.* var. *spicata* (75 days) Upright 20–26" tall multi-branched wheat-type celosia produces showy spikes, light pink at the base turning to a deep rose-magenta at the tip. Green foliage starts at ground level. A very prolific and striking display in mass plantings, as a border, or in containers. Excellent cutflower. Blooms July through frost. Hums with bees and other pollinators from mid-afternoon until dusk. Prefers full sun and moist rich soil, though does well in marginal dry soil as well. Does not tolerate standing water. ✿ ①

A=0.2g, $1.90 **B**=3g, $6.50 **C**=12g, $14.00

4956CR Cramer's Amazon *C. a.* var. *spicata* (120 days) A truly wild thing from the Peruvian Amazon. Makes a great landscape plant, shooting a 3–6' spire punctuated by 2–3" reddish-purple spikes. Amazing long red stems and the spectacular spikes make this a perfect cutflower. Its coleus-colored leaves, green splashed with purple, heighten its dramatic effect. Blooms hold up better than other *spicatas* as a dried flower if cut while the spikes are still short. As the blossoms age they turn white on the bottom. Requires a long season. Start inside 8 weeks before frost and transplant into warm ground. Pinch at 12" to encourage branching. ~250 seeds/g. ②

A=0.2g, $2.70 **B**=1g, $7.20 **C**=4g, $18.00

4962CE Kiwi Blue Cerinthe *C. major* var. *purpurescens* Annual. Also known as European Honeywort or Wax Plant. Vigorous bushy 12–30" annual comes into focus when the cooler nights of late summer and early fall accentuate its colors. Coin-shaped grey-green foliage covers the sprawling stems. Profuse blue shrimp-like bracts bear terminal purple flowers shaped like comfrey blossoms. Tolerates heat, but likes cool weather and will withstand light fall frosts, looking best when others are fading. Good in a massed border. Direct seed or start indoors 6–8 weeks before setting out after danger of frost. Quick emerging and rugged. "Please do not discontinue cerinthe…It is my very favorite and perhaps the seed most responsible for my continuing love of the spring ritual of planting. Think of the bumblebees," exhorted Susan Barnett of Jacksonville, NY. Cerinthe stays! ~15 seeds/g. ⑤

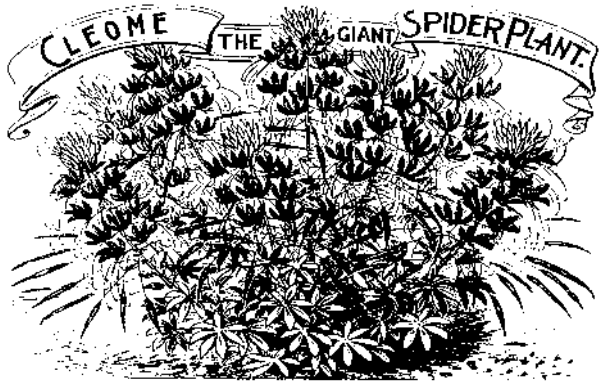
A=0.6g, $1.80 **B**=2.4g, $5.00 **C**=7.2g, $10.00

4965CY Firmament Chinese Forget-Me-Not *Cynoglossom amabile* Annual. Also known as Hound's Tongue. Uniquely bright dainty 5-petaled azure-blue blossoms. Floriferous throughout the summer with three blooms per cluster and a half dozen clusters per plant. Try alongside calendula for color contrast. Introduced by Ernst Benary. 1939 AAS. Start indoors 6 weeks before the last frost or direct seed outdoors in spring. Germinates in 5–10 days at 65–70˚. Space plants 9" apart. Prefer full sun. 16–18". ~200 seeds/g. ②

A=1g, $1.60 **B**=7g, $3.00 **C**=28g, $5.50

4968CL Chinese Lantern *Physalis alkekengi* Perennial, Zones 3-10. Grown for its deep orange "lanterns," the calyxes that surround the red fruits and hold their color when dried. *Physalis* is Greek for bladder, referring to these husks. May be sown indoors in warm place. Likes full sun. Dig out every three years to prevent invasion. ~600 seeds/g. ③

A=1g, $1.70 **B**=3g, $4.00 **C**=9g, $8.80



CLEOME *C. hassleriana*

Annual. The Spider Flower sets large open flower clusters with very long stamens atop 4' stalks. Blooms throughout the summer and likes the hot and dry conditions of midsummer. For better germination, prechill seeds in refrigerator. Do not cover seed. Likes alternating day (80˚) and night (70˚) temperatures to germinate. Will self-sow. **~450 seeds/g.**

4982RQ Rose Queen ③

A=0.5g, $1.90 **B**=2g, $4.50 **C**=8g, $6.80 **D**=32g, $14.00

4985VQ Violet Queen Gorgeous in August. ③

A=0.5g, $1.90 **B**=2g, $4.50 **C**=8g, $6.80 **D**=32g, $14.00

4988WQ White Queen ③

A=0.5g, $1.90 **B**=2g, $4.50 **C**=8g, $6.80 **D**=32g, $14.00

4992WI Wizard Coleus *Plectranthus scutellarioides,* formerly *Coleus blumei* (45 days) Perennial in Zone 10, grown as an annual. Leaves are a resplendent kaleidoscope of colors: rose and ivory edged in green, deep velvet burgundy centered with flame, bronzed pink, scarlet…12 in all. The colors are strongest in deep shade, lighter in part shade. Germinate at 65˚. Do not cover. Do not overwater; subject to damping off. Easy to grow and maintain. Just pinch off any late-season flower stalks. Grows 10–12", great in window boxes and planters. Nikos brings her favorites indoors before frost and enjoys their magic all winter long. ~3,500 seeds/g. ⑤

A=0.02g, $2.70 **B**=0.1g, $7.00

COLUMBINE *Aquilegia* spp.

Perennial, Zones 3-10. Columbines are an essential part of the cottage garden or border. Their delightful flowers in mixed colors bloom in spring and dance above attractive lobed leaves. Easy to grow, likes moist well-drained soil, sun or partial shade. Need light to germinate; take 3–4 weeks. **~800 seeds/g.**

4995SE Mrs. Scott Elliot Mixed *A. caerulea* Free-blooming white, red, lavender and pink spurred flowers rising to 30" on strong stems. Prechill seed 3–4 weeks. Will bloom first season if seeds are sown indoors in early spring. Do not cover. Flowers May and June, attracts hummingbirds. ✿ ③

A=1g, $2.10 **B**=3g, $4.20 **C**=9g, $8.80

4998EC European *A. vulgaris* A better landscape plant than Mrs. Elliot or McKana Giants because its leaves remain green through the whole season. Spurless blossoms are mostly pink, with a few purples and whites. 2½'.

A=0.3g, $1.80 **B**=1.2g, $3.80 **C**=6g, $6.00

5007YP Yellow Prairie Coneflower *Ratibida columnifera* Perennial, Zones 3-9. One recent summer, I was enticed into a field by a yellow fluttering of dancing flowers on erect 1–3' slender stems. As I approached, I could see that the yellow petals merely skirted around a protruding cylindrical chocolate-brown center disk. One of its names, Mexican Hat, evokes a tall sombrero and the lively and colorful Mexican Hat Dance. Prairie grasslands native likes full sun, blooms May through August, undaunted by drought. ~1,830 seeds/g. ②

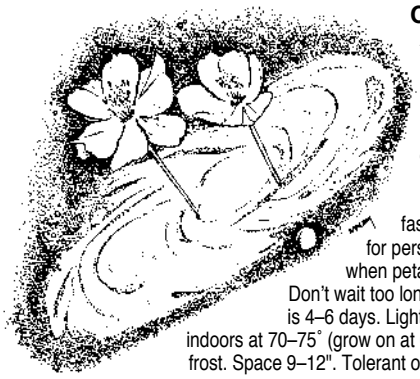
A=1g, $1.50 **B**=4g, $3.00 **C**=16g, $5.50

Coneflower Please see Echinacea, p. 81, and Rudbeckia, p. 96.

5012ES Early Sunrise Coreopsis *C. grandiflora* Perennial, Zones 3-10. Won 1989 AAS for its ability to bloom weeks earlier than other Coreopsis. Dense well-branched 18" plants are loaded with 2" semi-double vivid golden-yellow blooms loved by syrphid flies, lady beetles, lacewings, parasitic wasps and many other beneficials. Start indoors 8–10 weeks before setting out in sunny spot, 12–18" apart. Do not cover seed. For cuts, harvest when flowers start to open. Primed seed. ~400 seeds/g. ✿ ⑤

A=0.1g, $2.30 **B**=0.3g, $4.50 **C**=0.9g, $8.20

COSMOS *C. bipinnatus*



Annual. Sun-loving, free-flowering all summer, can serve as an accent, screen or cutflower. Colorful daisy-style flowers with yellow centers bloom amidst lacy cut foliage. Attracts a broad range of beneficial insects.

Culture: For best results, thin its fast-growing large plants. Deadhead for persistent blooms. Harvest cutflowers when petals on first flower are just opening. Don't wait too long! Old blooms don't last. Vase life is 4–6 days. Light aids germination. May be started indoors at 70–75˚ (grow on at 60–65˚) or direct seeded after last frost. Space 9–12". Tolerant of drought. **~125-150 seeds/g**.

5017CO Cupcakes OG (90-100 days) These shimmering delicate beauties were named for the pleating of cupcake papers, which prosaically describes the intricately fused folding of the outer petals. But not described is how the lightweight blooms seem to float on upright stems, more like ballerinas pirouetting in tutus of white and pinks than like cupcake papers. Even better, some of the blooms are doubled, with extra petal tufts surrounding a central yellow button, making for a charming profusion of frills: a scene stealer in the garden. The 4' tall plants attract pollinators and have long stems for cutting. Deadhead to keep the blooms coming. Full sun. ✿ ① **NEW!**
A=25 seeds, $2.80 **B**=100 seeds, $8.00 **C**=400 seeds, $20.00

5021CR Cranberries Double Click (100-120 days) My favorite color in this series, stunning dark maroon semi-double to fully double flowers have a light picotee edge. Not the earliest to bloom but well worth the wait. Temporarily set back by excessive rains but makes a good recovery. Strong stems with attractive ferny foliage grow 2–3'. Long-lasting in a vase. ⑤
A=0.2g, $2.40 **B**=0.6g, $4.00 **C**=3g, $14.00

5023RB Rose Bonbon Double Click (100-120 days) From the fabulous Double Click family. Luxuriant fluffy semi-double to fully double rose-colored blooms. Absolutely spellbinding. ⑤
A=0.2g, $2.40 **B**=0.6g, $4.00 **C**=3g, $14.00

5024DC Double Click Mix (100-120 days) These double and semi-double award-winning flowers gain lots of attention with their puffy blooms in shades of pink, plum and white. With sturdy stems, excellent for cutting, and prolific bloom until frost, this superior mix makes garden visitors do a double take. 4' tall. ⑤
A=0.2g, $2.40 **B**=0.6g, $4.00 **C**=3g, $14.00
D=12g, $42.00

5027PI Picotee (90 days) Bicolor flowers vary in hue from white to pink to rose, with each serrated petal edged in contrasting magenta. Plants grow 4' climaxed by blooms 2½–3" across. A beautiful addition to your cosmos bouquet. ✿ ③
A=0.5g, $1.70 **B**=3g, $3.50 **C**=15g, $6.80
D=1oz, $11.00

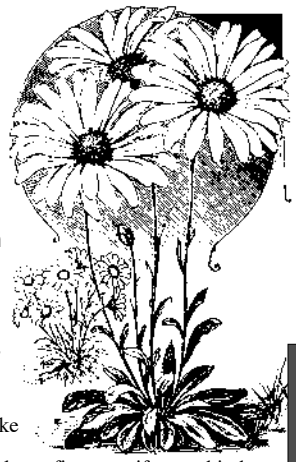
5028PW Psyche White Psyched for a pure-white cosmos with ruffled center petals plus thin rayed outer petals that create a fluted effect? Looked good even in wet humid 2013. Occasionally sets single flowers. May be the same cultivar Burpee offered as White Queen in 1923. ✿ ③
A=0.5g, $1.70 **B**=3g, $4.00 **C**=15g, $8.20 **D**=60g, $27.00

5035SM Sensation Mix (85-90 days) So named because its early maturity created a sensation when it first came out in 1930. Won AAS 6 years later. These large-flowered cosmos, in pinks, roses, magentas and occasional whites, need little tending. Withstand the first mild frosts of fall. 4–5'. Our second most-popular flower behind only Jewel Mix nasturtium. ✿ ②
A=1.4g, $1.60 **B**=14g, $4.50 **C**=56g, $8.00 **D**=1lb, $34.00

5039TG Tango Cosmos *C. sulphureus* Luxuriant flame-red free-flowering double blossoms wane to bright orange with yellow centers on wiry 18" stems that float above the deeply lobed dark green foliage. Ideal for cutflower production. 4' tall plants span almost 4½' wide. Planted alongside zinnias, sunflowers and amaranth, they were spellbinding in my flower bed. Tango dodged a light September frost and continued its dance well into October, but *C. sulphureus* is sensitive to frost. ②③
A=0.5g, $1.90 **B**=3g, $4.50 **C**=15g, $7.70 **D**=60g, $20.00

5045HO Harlequin Mix Dahlia OG *D.* x *hybrida* Tender perennial, Zones 8-10, grown as an annual. If you like to dally 'mongst the dahlias, these bicolored buffoons are sure to cheer you. This selection of compact semi-double 2½" blooms sit atop strong 14" stems and have a better color range than the conventional strain we used to carry. Semi-doubled bicolor collarette blossoms come in scarlet-yellow, cherry-white, purples, yellows, oranges and reds. Old blooms should be removed to encourage continued flowering. Dahlias prefer full to partial sun and grow most happily with cool nights and warm days. Even though started from seed, as with other dahlias, you can lift their tuberous roots before frost and overwinter them in a cool dry place, saving the tubers of your favorite kinds. ~125 seeds/g. ①
A=20 seeds, $3.60 **B**=100 seeds, $9.00 **C**=400 seeds, $28.00

SHASTA DAISY
Leucanthemum x *superbum*



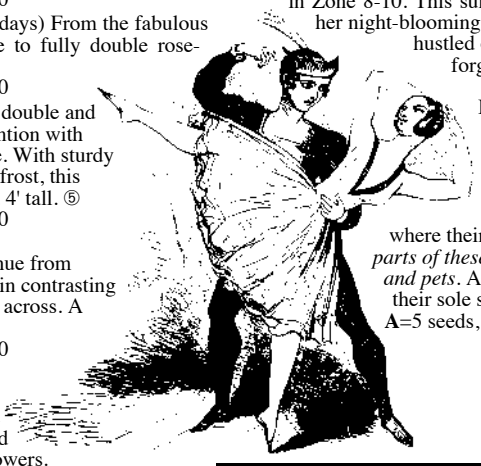
Perennial, Zones 4-10. *Leucanthemum* means 'white flower' and the daisy, with its white petals and yellow centers, is a flower almost everyone can name. Provides great cuts and can serve as a long-lasting low-maintenance backbone in a perennial bed or border. The first hybrid flower, developed by the legendary Luther Burbank from one Japanese and three European daisies. It took him 17 years.

Culture: Start indoors in warm soil 6–8 weeks before setting out in a well-drained location in full sun. Pinch back in late spring for bushier sturdier plants.

5047SD Alaska Strain The clean snow-white flowers with bright yellow centers make cheery cutflowers and border plants. One of the easiest perennials to grow; will usually bloom first year if started indoors in spring and transplanted when soil warms. 3' tall. ~750 seeds/g. ②
A=0.5g, $1.50 **B**=4g, $3.00 **C**=16g, $5.50

5049CD Crazy Daisy We're crazy for this daisy because its quilled petals are unlike any other in the Shasta class. Almost all of the 2½–3" creamy white blossoms are fully double and reminded us of dahlias. Bloomed the second year for Donna Dyrek starting on July 6 and put on a good show for nearly a month. The later blossoms were less doubled, showing the small yellow centers more. Required no protection to overwinter in central Maine, but mulching is recommended for colder areas. 24–28" tall. Need a cold period and long days to initiate bloom. ~900 seeds/g. ③
A=0.1g, $2.10 **B**=0.3g, $4.00 **C**=1.2g, $7.70

5050DO Purple Ballerina Datura OG *Datura metel* (95 days) Perennial in Zone 8-10. This summer my friend called at short notice to come enjoy her night-blooming cereus, whose bloom would solely last the night. So I hustled over and inhaled an exquisite fragrance not soon to be forgotten—or repeated. But imagine that kind of vesperal scent delivered each and every night. Enter Purple Ballerina: with upward-facing 6–8" lilac petals striped with deep purple that unfurl at dusk to exude a lily-like fragrance. Brava! Growing 3–4' in the garden, they thrive in summer heat and attract moth pollinators at night. When planted in containers they grow to a more manageable 2–3' and can be moved to where their fragrance will be most enjoyed at night. *Caution: All parts of these plants are poisonous so use caution around children and pets*. And hummingbirds have been known to OD if datura is their sole source of nectar. ① **NEW!**
A=5 seeds, $3.20 **B**=20 seeds, $12.00 **C**=100 seeds, $50.00



DELPHINIUM x *cultorum*

Perennial, Zones 3-7. The Pacific Giants were developed in California in the '40s. Magnificent dense racemes make delphinium excellent in the border and as a cutflower. The name comes from the Greek for 'dolphin' and refers to the shape of the spur containing the nectar. Large raceme with many flowers. All parts of the plant are toxic if ingested, and can cause skin irritation.

Culture: Old seed goes dormant and is very hard to reawaken so order fresh seed each year. Prechill seed for 2–4 weeks, then germinate at 65–75˚ and grow on at 50–60˚. Likes sun, moist rich soil, can tolerate some shade. Heavy feeder; sidedress in spring with well-composted manure. Harvest when one quarter of the flowers are open. **~450 seeds/g**.

5052AD Astolat Pacific Giant Pastel mix in lilac, raspberry and rose with dark bees. 6'. ③
A=0.2g, $2.00
B=0.6g, $4.20
C=1.8g, $8.80

5054BK Black Knight Pacific Giant Intense dark purple with black bees. Stately and breathtaking. 6'. ③
A=0.2g, $2.00
B=0.6g, $4.20
C=1.8g, $8.80

5059CY Connecticut Yankee Mix Dwarfed version grows only 3'; good where wind is a problem. 1965 AAS in blue, purple, lavender and white. ③
A=0.25g, $2.00
B=1g, $6.50
C=3g, $13.00

DIANTHUS spp.

The name comes from the Greek meaning 'divine flowers.' Some are carnations; some are commonly known as Pinks, not for their color, but for their serrated petal tips which look like they've been cut with pinking shears. All have fabulous fragrance.

5061SW Double Choice Mix Sweet William *D. barbatus* Biennial, Zones 4-10. A fragrant self-sowing biennial with familiar flat-topped flower clusters in red, pink, white, lavender or mixed colors. Germinates in 7–14 days at 70˚. May be started 2 months before setting outdoors, or direct seeded in late summer or fall. Requires full sun and good drainage; likes lime. 18". ~930 seeds/g. ②
A=0.5g, $1.50 **B**=7g, $3.00 **C**=28g, $6.60

5063RG Reisen Giant Superb Mix *D. caryophyllus* Perennial in Zones 8-10, grown as an annual. 20" plants produce fully double fringed carnations in an array of colors (red, violet, rose, white and bicolor) with corresponding differences in fragrance. The perfumed clove scent of the red is the most tantalizing, reminiscent of the exquisitely scented flowers that one reads about in old horticultural lore. ~500 seeds/g. ③
A=0.2g, $1.90 **B**=1g, $3.50 **C**=3g, $6.00

5065RL Rainbow Loveliness Mix *D.* x *hybrida* Annual. Rainbow Loveliness has fragrance—glorious, heavenly, sinfully delicious, intoxicating, jasminy—and good looks. "Swallowtails loved them," observed Jillian Forman of Young Sapling Farm, Rexville, NY. The lilac-white, which we grew, sports deeply fringed white blooms with hints of pink at the tip and a greenish center eye, creating a wispy feathery effect. This mix of border pinks also includes strains of carmine, pink and bicolored 1 1/2" blooms in loose clusters. Blooms late July from early June transplanting. 14". ~1,200 seeds/g. ✿ ⑤
A=0.02g, $1.60 **B**=0.1g, $3.50

5067DI Lacy Blue Didiscus *Trachymene coerulea* (95 days) Annual. Also known as Blue Lace Flower, introduced from Australia in 1828. Looks like a light blue version of Queen Anne's Lace. Airy flower heads on 2' stems floating like a blue mist above attractive finely cut foliage are excellent for cutting. Start indoors or direct seed after danger of frost. Transplant 8" apart. Likes full sun. ~360 seeds/g. ③
A=0.25g, $1.80 **B**=1g, $3.70 **C**=3g, $6.70 **D**=15g, $16.00

5072DR Drumstick Flower *Craspedia globosa* (100 days) Drumroll, please. The globular dimpled 3/4" yellow flower heads set atop durable 18" stems do look a bit like they could mark out a paradiddle or two. But better use would be as a carefree garden accent with a prolonged bloom, or brought inside in a long-lasting bouquet. They also dry with no fuss. Just stand them upright and they dry perfectly, retaining their color. A tender perennial in Zones 8–11 that blooms almost the entire season. In less temperate climes start indoors 6–8 weeks before the last frost. ~1,700 seeds/g. ③
A=0.1g, $2.10 **B**=0.3g, $5.40
C=1.2g, $18.00

5079BF Blue Flax *Linum perenne* subsp. *lewisii* Perennial, Zones 4-9. Also known as Prairie Flax. Single light-blue flowers and finely cut foliage for borders or rock gardens. New flowers open every morning all summer, fade in afternoon heat. Likes full sun. Very drought tolerant. 9–12". Start indoors in a cool place 6–8 weeks before setting out or direct seed in cool soil in spring or fall. ~750 seeds/g. ②
A=1g, $1.60
B=7g, $3.00
C=28g, $6.00

Key to abbreviations and symbols in the catalog

OG after cultivar name = entire lot is certified-organic seed. See page 104 for for more information about the OG and ECO designations.
ECO after cultivar name = entire lot is sustainably grown seed.
BD after cultivar name = entire lot is biodynamically grown seed.
PVP = Plant Variety Protected. Unauthorized propagation of the seed is prohibited. The use of PVP in the catalog is for informational purposes only and in no way constitutes an endorsement by Fedco of plant patenting.
AAS = All-America Selection.
❄ indicates cold-hardy through at least part of the Maine winter. See list on page 27 for more information.
☙ = a variety introduced by Fedco followed by the year first offered.
Ω = a variety grown and supplied by the plant breeder. More on page 36.
✿ = a variety especially attractive to pollinators.
~ = approximately. Complete symbol key on page 5.

FLOWERING CABBAGE & KALE *Brassica oleracea*

Biennials grown as annuals. Sometimes used for garnishes or in salad mixes. Well adapted to cold climates, they are at their best when most flowers have given in to fall frosts. **~350 seeds/g**.

5082FC Flowering Cabbage Mix Good ornamental for our climate. The colors—green outer leaves and pink, white or purple centers—deepen at the onset of chilly autumnal nights. Start indoors 5–7 weeks before setting out in midsummer for fall maturity. While weather is still hot, sidedress with manure so the plants will make rapid growth before nights begin cooling. As autumn approaches, withhold nitrogen to speed coloring. 10". ③
A=0.25g, $1.80 **B**=1g, $3.70 **C**=4g, $6.00

5084RC Red Chidori F-1 hybrid. Flowering kale is called *Ha-Botan* in Japan, meaning 'leafy peony.' The Japanese are world leaders in hybridizing these ornamentals, and in Red Chidori they have brought their work to its ultimate expression. Chidori had the brightest purple outer leaves and the sharpest red centers of any we tried. These colors reach their zenith shortly after frost when other garden hues are fading. Red Chidori leaves have finely ruffled edges that further accent their beauty. Allow enough space to grow 8–12" high and 12–14" across. Tested negative for black rot & black leg. ⑤
A=0.2g, $2.60 **B**=1g, $6.60 **C**=4g, $20.00

5091FN Forget-Me-Not *Myosotis sylvatica* Perennial, Zones 3-9. The older I get, the more I want to be surrounded by plants that care for themselves. This little charmer, a biennial or short-lived perennial that self-seeds for many years, fits the bill. Excellent grown in a mixed border, where they peek out atop 6" stems with clusters of sky-blue color. They tolerate a wide range of conditions and grow in both sun and shade. Now if only I can *remember* not to weed them out the following spring. ~1600 seeds/g. ②
A=0.1g, $1.60 **B**=0.5g, $3.50 **C**=3g, $6.00

5095FC Tall Mix Four O'Clock *Mirabilis jalapa* Annual. Also known as Marvel of Peru. Breck's in 1885 called it "a very desirable plant where there is plenty of room," and suggests each specimen should stand singly 3' apart. The fragrant trumpet-shaped flowers, in bright shades of cerise, burgundy, pink, yellow and white, open in late afternoon, reaching peak glowing loveliness at dusk. The 2–3' plants make good background or annual hedge. Start indoors, transplant out when warm weather has settled in. Likes full sun. Will self-sow in warmer areas. Drought-tolerant. ~17 seeds/g. ②
A=3g, $1.50 **B**=9g, $3.00 **C**=27g, $5.50

5097BG Burgundy Gaillardia *G. aristata* Perennial, Zones 4-10. Also known as Blanketflower. When I first laid eyes on this in a nursery, it stood out from the pack. Burgundy has all the toughness of a prairie native enhanced with the solid deep wine color of a sophisticated garden-tour specimen. 3–4" daisy-like flowers bloom all summer on 2–3' plants. A favorite of butterflies and of gardeners who like to bring cutflowers inside. This fancy but low-maintenance cultivar likes light dry well-drained soil and full sun. Plant 18–24" apart. ~280 seeds/g. ✿ ③
A=0.25g, $2.00 **B**=1g, $4.20 **C**=4g, $8.00

5100ND New Day Formula Mix Gazania *G. rigens* Annual. Open-faced single blooms worship the sun in their daily salutations. Shades of bronze, orange, yellow, mauve, white and sepia all with yellow centers, and some with darkened petal bases, create a dynamic display. Its impressive drought tolerance shined with a steady bloom performance beginning in early July and continuing through the nearly rainless August and September. These easy-to-grow short 8–10" plants with leathery dark green leaves keep tidy along sunny garden edges and are ideal for color in patio containers. Coated seed. ~175–225 seeds/g. ⑤
A=0.1g, $2.40 **B**=0.5g, $6.10 **C**=2g, $20.00

GLOBE AMARANTH *Gomphrena globosa*

Annual. Beautiful round clover-like 1" flowers on 2' stems perfect for drying. Also enjoyable as bedding plant. We've chosen for earliness, floriferousness, compact habit and good stem length.

Culture: Easily grown in any soil, likes hot sun, blooms prolifically. Tolerates dry weather and some frost. Chill seed 4–6 weeks at 40˚, then start indoors at 60–70˚ for best germination. Germination is erratic; can take from 7–30 days. Grow on at 55–60˚. Do not overwater. Transplant in 8–12 weeks, spacing at 12–18". **~200 seeds/g.**

5102PG Las Vegas Purple ②
A=0.1g, $2.40 **B**=0.4g, $6.10 **C**=1.2g, $14.00

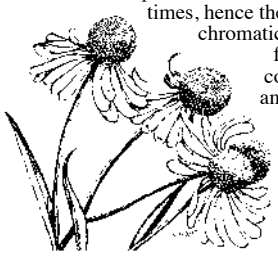
5104QG QIS Red Vibrant strawberry-red profuse blooms. QIS stands for Quality In Seed. Enormously popular with commercial growers. ③
A=0.1g, $1.80 **B**=0.4g, $3.50 **C**=1.2g, $6.60

5109MG Las Vegas Mix Three vibrant colors: pink, purple and white. ②
A=0.1g, $2.40 **B**=0.4g, $6.10 **C**=1.2g, $14.00

5111GO Grace Mix Godetia OG *Clarkia amoena* (90 days) Annual. Also called Farewell to Spring. Frank Morton, who's growing a lot of flowers these days, calls this godetia the most beautiful flower in the garden: "It took my breath away." We agree that these large and long-lasting 3" "satin flowers" are vastly underrated. With abundant blooms in red, pink, salmon, lavender and white, and with a bright red patch in the heart of the four petals, they make a lovely addition to the cottage garden. They're productive, too, with up to 15 stems on each 30" plant, each producing 5–6 clusters of flowers. And Grace is the best godetia for cutting, with a tremendous vase life. I was curious how Frank could grow an open-pollinated flower that is listed everywhere as a hybrid. His theory is that the initial cross was between closely related species, *C. a.* subsp *amoena* x *C. a.* subsp *whitneyi*, with the resultant color cavalcade continuing to be called a hybrid, even though it remained stable from that point on. And we get to enjoy the result. ① **NEW!**

A=25 seeds, $3.00 **B**=100 seeds, $8.00 **C**=400 seeds, $25.00

5119HF Helen's Flower Mix *Helenium autumnale* Perennial, Zones 3-10. Offered in the past as Sneezeweed. Supposedly used for snuff in earlier times, hence the sneeze. Also known as Sunny Bride. A rich chromatic scale of bronze, brown, crimson and yellow for an end-of-summer display. Single flowers cover the tops of branching upright 4–5' plants and resemble Coreopsis but have a large center "button" like a coneflower. Makes great late-season color. Not fussy, easy to grow, excellent for cutting. At its prime when most perennials have finished blooming. Generally a low germinator; needs 2–3 weeks. ~5,000 seeds/g. ③



A=0.05g, $2.90 **B**=0.2g, $9.60

5113SS Sunburst Heliopsis *H. scabra* Perennial, Zones 4-9. A most unusual heliopsis that sports variegated foliage featuring patterned bright green veins etched against a white background. Masses of bright yellow daisy-like flowers with darker centers stand above the foliage to complete its arresting display. Bushy plant grows slowly the first year to 15–18" but continues up to 4' in subsequent seasons. Donna's first bloom was July 12 from an April 8 start. It was still flowering in October. ~230 seeds/g. ⑤

A=0.1g, $3.10 **B**=0.4g, $9.20 **C**=1.2g, $26.00

5116MH Marine Heliotrope *Heliotropium arborescens* (120 days) Tender perennial, Zone 9-10, grown as an annual. Native to Peru, an old-fashioned scented flower with a rich history. The aroma fills the garden on a cool damp day. Victorians edged their rose beds with heliotrope and it is still cultivated in Europe for perfumery. Smells like sweet violet, but deeper, and has been described as similar to vanilla, almond or cherry pie. Works well in hanging baskets, containers, the front of borders or any location where the scent will readily reach you. It may be transplanted indoors for the winter. 14–18" plants with deeply etched viburnum-like dark green leaves bear big flat clusters of tiny star-shaped royal blue flowers. Somewhat slow, erratic germinator, takes at least 2–3 weeks. ~1,500 seeds/g. ③

A=0.1g, $1.90 **B**=0.6g, $4.70 **C**=3g, $10.00

5120LH Luna Mix Hibiscus *H. moscheutos* Perennial, Zones 5-9. We of the foreshortened northern summers need a bit of the extravagant flounce of an hibiscus to put an exclamation point on the season. When we lost Southern Belle several years ago, we went looking for a replacement. These plants fit the bill with 6–8" saucer-shaped flowers in a mix of pinks, red and white, with contrasting red eyes where a contrast is to be had. Though at 24–36" they are somewhat shorter than our previous selection, the big bushy 2' wide plants still make a dramatic statement. They have proved themselves winter hardy and become more resilient to water and drought stress once they're established. Emerge slowly in spring, like full sun. ⑤

A=10 seeds, $5.30 **B**=30 seeds, $13.00 **C**=120 seeds, $45.00

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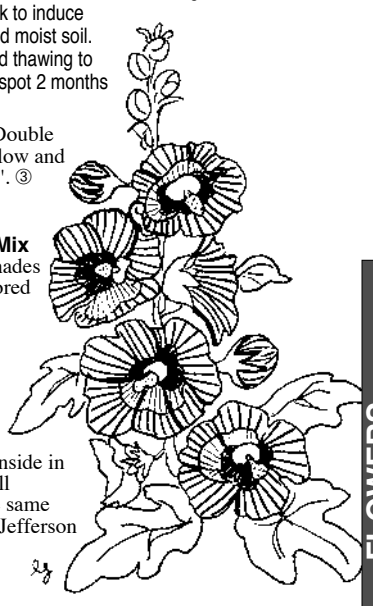
HOLLYHOCK *Alcea rosea*

Biennial, Zones 3-8, often reseeds. An old-time favorite for background color. **Culture:** Needs staking. Cut flower stalk to induce rebloom. Likes full sun, lots of room, and moist soil. Seed may require alternate freezing and thawing to break dormancy. Start indoors in a 70˚ spot 2 months prior to transplanting. **~105 seeds/g.**



5122CD Chater's Double Mix Double flowered in shades of red, pink, yellow and white. Dates back to the 1880s. 4–5'. ③

A=1g, $2.00 **B**=5g, $4.50 **C**=15g, $10.00

5124SM Indian Spring Single Mix Old-fashioned single 7' beauty in shades of red, yellow, white and rose. Favored by hummingbirds. 1939 AAS. ✿ ②

A=0.25g, $1.70 **B**=1g, $3.00 **C**=3g, $6.00

5127BH Black Hollyhock *A. r.* var. *nigra* Heirloom with shimmering burgundy-black single flowers. Lasts 3–4 years in favorable conditions. Surface sow inside in April. Overly rich potting mixes will encourage damping off. May be the same black hollyhock grown by Thomas Jefferson at Monticello. ✿ ③

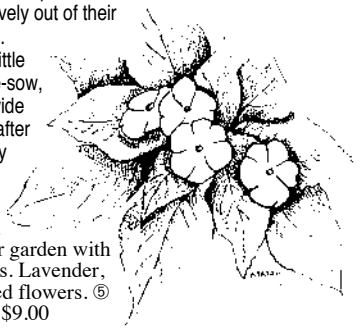
A=0.25g, $1.80 **B**=1g, $3.00 **C**=4g, $7.20

5132HY Honesty *Lunaria annua* Biennial, often grown as an annual, for everlasting arrangements. Also known as Silver Dollar, Moneyplant and Moonwort. Could be a solution to economic woes if only its shimmery silver seed pod "coins" were legal tender. Honesty is a winter-hardy biennial with fragrant lavender flowers usually grown for its large coin-shaped seed pods that shimmer in winter bouquets. Sow indoors at 65–70˚, grow on at 60˚ at night before setting out to a sunny location, or direct sow spring or fall. Depending on conditions, may not flower until second year. 3'. We were thinking they should plant some Honesty at the White House until we remembered another name is Moneyplant. ~50 seeds/g. ②

A=1g, $1.60 **B**=14g, $3.80 **C**=42g, $7.20

IMPATIENS *I. walleriana*

Perennial in Zone 10, grown as an annual. Impatiens is named for the way its seeds pop explosively out of their ripe pods. Freely branching 8–10" plants. **Culture:** Thrives in shade and requires little care. Start indoors, need light so surface-sow, 70-80˚, takes 14 days to germinate, provide even moisture, do not overfeed, set out after danger of frost. Pinch blooms before they go to seed for best display. **~1,600 seeds/g.**



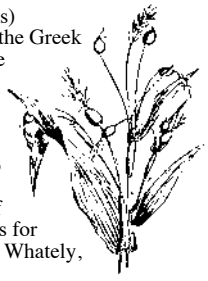
5142SE Paradise Mix F-1 hybrid. Bring a bit of tropical color into your garden with this new mix in the Super Elfin series. Lavender, fuchsia, violet and cantaloupe-colored flowers. ⑤

A=0.03g, $3.00 **B**=0.15g, $9.00

5144JL Blue Pearl Jacob's Ladder *Polemonium caeruleum* (90 days) Perennial, Zones 3-8. A staple of the shade garden in cooler climes. Where so few plants flower, Blue Pearl shines. Sky blue 1–1½" cup-shaped blooms with distinctive gold stamens flower from late spring to early summer except in extreme heat. The long-lived compact 1' plants perform best in partially shaded borders, at the edge of woodlands or at the base of small shrubs or roses. Space 1' apart. Called Jacob's Ladder for the arrangement of parallel leaflets along the stem. Makes a beautiful cutflower. ~850 seeds/g. ③

A=0.1g, $1.90 **B**=0.5g, $4.00 **C**=2g, $6.00

5147JO Job's Tears OG *Coix lacryma-jobi* (100 days) Perennial in Zone 9-10, grown as an annual. Named for the Greek *coix* which means 'palm,' this ornamental grass's foliage resembles corn with blades up to 1½" wide. Spiky 2–3' stalks good for planters or as filler in dried fall arrangements. Sets pendulous sprays of globular pearly purple-grey seeds, the tears, which may be strung as beads for necklaces. A great favorite of kids who love to harvest the seeds. Start indoors in late March or early April. Forgiving and easy to grow. Believed to be one of the oldest grasses in cultivation, featured in seed catalogs for almost two centuries. Our thanks to Alicia McDonald of Whately, MA, who sent us seed. ~5 seeds/g. ①



A=2g, $1.90 **B**=6g, $4.00 **C**=24g, $10.00

5150QM Joe Pye Weed *Eutrochium purpureum* Perennial, Zones 4-9. Formerly *Eupatorium*. Also known as Queen of the Meadow or Gravel Root. Tall, stately and beautiful native with dense florets of dusty pinkish-purple flowers and foliage that releases the scent of vanilla when crushed. At 5–9' tall, makes an impressive background plant and a good cutflower. Medicinally, the root is used to treat chronic irritable bladder, urinary infections, kidney stones, menstrual cramps and prostate infections. Also stimulates circulation and reduces inflammation. Does best in moist well-drained areas, full sun or part shade. Surface sow in spring or fall; needs stratification unless sown in fall; takes 3 weeks to germinate; direct seed or transplant. ~2,809 seeds/g. ✿ ②

A=0.02g, $1.80 **B**=0.1g, $4.00 **C**=0.4g, $7.00

5152HM Helen Mount Johnny-Jump-Up *Viola tricolor* Perennial, Zones 3-9. Also known as Heartsease Pansy. This 4–6" favorite bears tricolor blooms in violet, lavender and canary yellow. Small abundant flowers like partial shade. Can be direct seeded early spring for flowers late in season or sown in fall for earlier blooms the following year. Some call it invasive, others enjoy its cheerful spreading habit. Flowers make edible decorations with a faint wintergreen taste. ~900 seeds/g. ②

A=0.5g, $1.70 **B**=1.5g, $3.50 **C**=4.5g, $5.60

5154KM Kiss-Me-over-the-Garden-Gate *Polygonum orientale* Annual. It is easy to imagine an amorous meeting amongst the shelter of these 6–7' annuals, surrounded by heart-shaped leaves and large tassels of lightly scented pink blossoms! Looks like a beautiful giant Smartweed. Although transplanting temporarily sets it back, it grows vigorously to take up a full square yard at maximum size. Blooms from July to frost, sometimes self-sows. Start indoors at 70–75˚, covering the seed, keeping soil moist till emergence. Fussy, slow, erratic germinator. Germination can be improved by stratifying for three weeks. Likes full sun or light shade. Native to China. Offered by Burpee in 1935 for 15¢ per packet as Ruby Gem. ~20 seeds/g. ①

A=1g, $2.20 **B**=3g, $4.60 **C**=12g, $8.80

5157WO White Finch Laceflower OG *Orlaya grandiflora* (65-70 days) Annual. Though the bird hails from Australia, with this beauty in your garden, you can add white finches to your backyard annual count. The White Finch flower exhibits a dainty delicacy resembling lace-cap hydrangea, with the central florets of a flat-topped cluster surrounded by a ring of larger flowers that might, poetically, resemble the fluttering of birds' wings. The plant stands tall at 2–3' with ferny foliage and sturdy stems. Deadheading will keep the flowers coming until frost. For long-lasting enjoyment as an airy addition in bouquets, harvest before the pollen starts to shed. When dried, the seed pods can also be arranged to interesting effect. Best direct seeded. Full sun. ① **NEW!**

A=25 seeds, $2.60 **B**=100 seeds, $7.00 **C**=400 seeds, $20.00

LARKSPUR *Consolida* spp.

Annual. Formerly known as *Delphinium consolida.* Delphinium-like long-stemmed flower spikes are used as cutflowers or in dried arrangements. Upright 3–4' tall plants. The Giant Imperial series features long racemes of double flowers.
Culture: Likes cool moist conditions. Very slow to give in to fall frosts. May be direct seeded in early spring or started indoors and grown on at 55˚ and set out in 8 weeks. Does not germinate well in warmer temperatures. Refrigerating for a week improves germination. Cut when one third of the flowers on the stem are open. For cuts, vase life is 6–8 days. Excellent for drying. **~330 seeds/g** except for Blue Cloud.

5160EG Earl Grey *C. ajacis* For that kind of cloudy day on the Maine coast when subtle "cool" colors come into their own and the chill invites you to curl up with a cup of Earl Grey tea. This pearly grey-lavender larkspur on tall stalks fits nicely into such an atmosphere, its delicate shades revealing their shimmering clarity. Maybe enjoying them in a bouquet is your cup of tea. ③

A=0.1g, $1.90 **B**=0.5g, $4.00
C=3g, $9.00 **D**=12g, $28.00

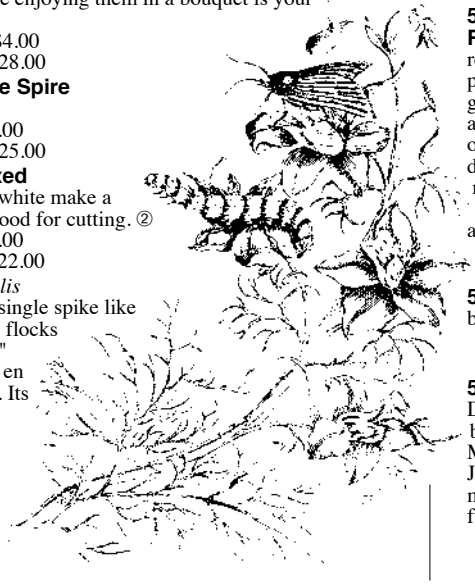
5162BS Giant Imperial Blue Spire *C. a.* Dark blue. ③

A=1g, $1.90 **B**=4g, $4.00
C=16g, $8.00 **D**=64g, $25.00

5168MX Giant Imperial Mixed *C. a.* Pinks, purples, blues and white make a beautiful background and are good for cutting. ②

A=1g, $1.90 **B**=4g, $4.00
C=16g, $6.00 **D**=4oz, $22.00

5169BC Blue Cloud *C. regalis* Blue Cloud doesn't shoot up a single spike like most larkspurs. Instead it sends flocks of bushy 5-petaled rich blue 1/2" florets on wispy foliage, which en masse give the effect of clouds. Its tiny seed pods are equally decorative. Will self-sow vigorously. ~800 seeds/g. ③



A=0.1g, $1.80
B=0.5g, $3.50
C=5g, $7.50
D=50g, $22.00

5171LM Lavatera Mix *L. trimestris* Annual. Also known as Herb Treemallow. Every stalk is covered with single funnel-shaped blossoms. An explosion of exotic blooms in mostly pink shades, some light and some dark, and the remainder white on 2' tall bushy plants, great for borders. Cut when flowers are unfurling or have just begun to bloom. Vase life is at least one week. Will survive light fall frosts. Botanical name honors 16th-c. Swiss naturalist brothers Lavater, and its three-month bloom time in warmer climes. Start indoors at 70–72˚ 8 weeks before setting out, growing on at 65–70˚ days and 60˚ nights, or direct seed in sunny spot. Space 18–24". ~150 seeds/g. ②

A=1g, $1.60 **B**=4g, $3.50 **C**=16g, $5.50

Lavender See **4585** and **4586** p. 82 in the Herb Section.

5180CP Crystal Palace Blue Lobelia *L. erinus* Perennial in Zones 9-10, grown as an annual. With bronze-green foliage and a profusion of stunning deep blue flowers, this is the perfect window-box plant. 4" tall, great for edgings, walks and borders. An old variety, offered by Henderson in 1902 for a dime per packet. Named for the Flemish botanist Mathias de l'Obel who was a physician to King James I of England. Needs light to germinate. Tolerates some shade. Cannot stand frost. ~30,000 seeds/g. ③

A=0.2g, $1.80 **B**=1g, $4.00
C=4g, $6.60 **D**=28g, $28.00

LOVE-IN-A-MIST *Nigella* spp.

Annual. Everlasting grown especially for its spiky decorative seed pods. Germinates 10–14 days at 60˚. Grow on at 60–65˚. Set transplants 6–9" apart.

5184PJ Persian Jewels Mix *N. damascena* (70 days) Profuse blooms in pink, blue and white shades surrounded by a cloud of greenery make lovely bouquets. Seed heads are used dried and are especially fetching with a little bit of the flower attached. Direct seed as soon as ground can be worked, or sow indoors in a cool spot 2 months prior to setting out. Plant in full sun. 18". ~760 seeds/g. ②

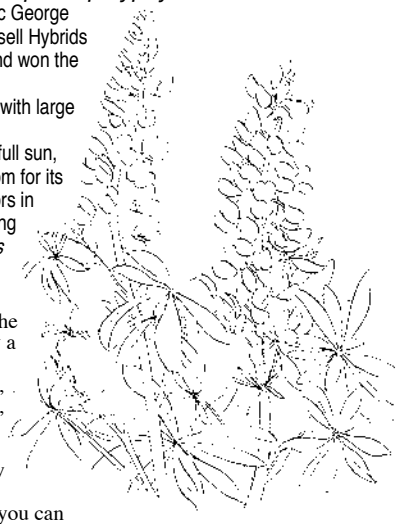
A=0.4g, $1.50 **B**=2g, $3.20 **C**=14g, $6.00

5187EX Exotic *N. hispanica* Exotic's golden-brown pods are similar to velvetleaf's wonderful starry seed pods except with long fancy tendrils. Will add interest and volume to any dried arrangement. Unlike velvetleaf, this annual won't be a nuisance in the field. Doubles as a cutflower with open form, striking maroon stamens and an arresting shade of deep blue, almost purple. Atop 16" stems, the blossoms hold longer in a bouquet than other kinds of Love-in-a-Mist. Likes full sun or light shade. ~900 seeds/g. ③

A=0.1g, $1.80 **B**=0.4g, $4.40 **C**=2g, $12.00

LUPINE *Lupinus polyphyllus*

Perennial, Zones 4-9. Lupine fanatic George Russell of York, England, bred Russell Hybrids Choice Mix, introduced it in 1937 and won the coveted Gold Medal from the Royal Horticultural Society. Dense spikes with large flowers in full range of colors.
Culture: Likes a cool moist spot in full sun, preferring sandy soil with ample room for its roots to spread. Can be sown indoors in late winter, or outdoors in early spring or late fall. 3'. *Seeds and seed pods are poisonous.* **~35 seeds/g**.



5195MC My Castle Red Russell In most lupine mixes the red shades are overshadowed by a preponderance of blues. The genetics of lupines are such that, as a patch crosses and self-sows, over time the blues will dominate. So now you can revitalize your patch with a new burst of red. Or, grown separately where they will not cross, you can maintain a solely red patch. ③

A=1g, $1.90 **B**=4g, $4.40 **C**=16g, $7.70

5199RL Russell Hybrids Choice Mix Mostly purple blooms with some bicolors in magenta, white and pink. ②③

A=1.4g, $1.70 **B**=7g, $3.40 **C**=28g, $6.80

5203MC Maltese Cross *Lychnis chalcedonica* Perennial, Zones 3-10. Desirable 3' border plant attracts hummingbirds and butterflies by producing brilliant scarlet florets, each a five-part cross. Excellent for cutflowers. Makes a hot color combination with Rudbeckia and Coreopsis. Thomas Jefferson grew these at Monticello in 1807. Start indoors in early spring or midsummer for blooms next year. Do not cover seeds. Likes moist soil and full sun. ~2,000 seeds/g. ✿ ③

A=0.4g, $1.60 **B**=2g, $3.40 **C**=6g, $5.60

MARIGOLD *Tagetes* spp.

Annual. "We do not consider a flower garden complete without the good old-fashioned French and African marigolds." –Breck's, 1885. Good for bedding, for cuts, in planters or borders. Their warm colors cheer all summer long and positively blaze in the light of early autumn. Native to the Americas and said to have been sacred to the Aztecs. In 1939 Burpee's Red and Gold hybrid was the first hybrid flower from seed offered commercially in the United States.

Culture: Fast and easy to grow from seed. Sow after soil has warmed, or inside in a warm (75–80˚) spot, 3 weeks before setting out after danger of frost. Likes heat and full sun. Tolerant to drought. **~300 seeds/g** unless otherwise noted.

African Marigold *T. erecta*

Tallest of the marigolds with largest leaves and flowers. Blooms are fully double and 3–4" across, resembling carnations. Plants make a bold highlight in large borders and crank out cuts.

5211CR Crackerjack Mix Early mix of orange, gold, yellow. Large fully doubled flowers on tall 30" plants that rarely need staking. ③
A=1g, $1.60 **B**=14g, $3.60 **C**=56g, $7.20

5213FL First Lady 1968 AAS, later voted the all-time favorite AAS flower. Lovely 20" border or hedge plant, covered with sunny yellow 3½" double flowers that keep coming till frost. ⑤
A=0.1g, $3.00 **B**=1g, $17.00

5216NC Inca II Mix Fitting sequel to the original Inca series, but stronger, earlier by 7–10 days, and more compact with a new primrose-yellow joining the original yellow, orange and gold. Produces enormous 4" fully double brilliantly colored blooms. Great for massed borders, these compact 12x14" plants allow you to pack them in. Remove spent flowers to promote new blossoms and maintain a clean look. Likes moist well-drained soil. Withstood the 2011 hurricane deluges with exceptional aplomb. ~400s/g. ⑤
A=0.1g, $3.00 **B**=0.3g, $7.50 **C**=1.2g, $21.00

5219VA Vanilla Formerly known as Sweet Cream and actually resembles sweet creamy farm milk—outstanding off-white color. Profuse large 3–4" double blooms on stocky 18" plants until frost. Use for cutting or keep deadheaded to maintain Vanilla's classy good looks. ⑤
A=0.05g, $3.10 **B**=0.2g, $7.80

French Marigold *T. patula*

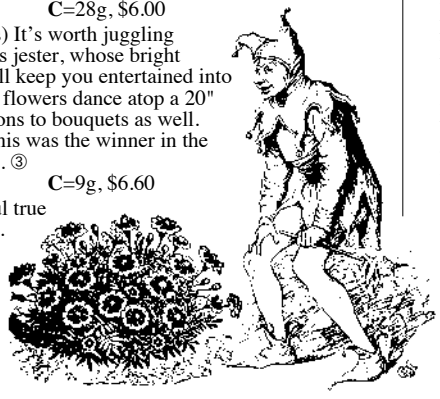
Small bushy plants with flowers approximately 2" across in a wide range of colors including yellows, oranges, rich reds, mahogany and bicolors. Bloom styles, depending on the cultivar, can be single, crested, semi-double or fully double. Outstanding edging plants bloom early summer till frost and stand well in all weather.

5222BM Bambino This darling's variegated petals of dark and light orange swirl around an orange center button, giving the effect of a tiny circus tent. Plentiful 2½" single-petaled flowers set early on semi-mounded 8" bush. Blooms strong until frost, championing orange in the garden till the pumpkins take over. ③
A=0.5g, $2.10 **B**=2.5g, $4.70 **C**=15g, $9.00

5224BR Brocade Mix Abundant color on neat, compact 10" plants. Ruffled double flowers in rust, yellow, orange, red and bicolors. ③
A=0.5g, $1.70 **B**=7g, $3.50 **C**=28g, $6.00

5226CJ Court Jester (100 days) It's worth juggling garden space to make room for this jester, whose bright stripes of burgundy and yellow will keep you entertained into the fall. Many small single striped flowers dance atop a 20" tall plant and make alluring additions to bouquets as well. Don't be fooled by look-alikes—this was the winner in the court of our opinion. ~360 seeds/g. ③
A=1g, $2.00 **B**=3g, $4.00 **C**=9g, $6.60

5229LD Lemondrop A beautiful true yellow extra-dwarf crested variety. Blooms early, through summer into fall. Only 6–8" tall.
~640 seeds/g. ③
A=1g, $1.70
B=7g, $4.20
C=28g, $12.00

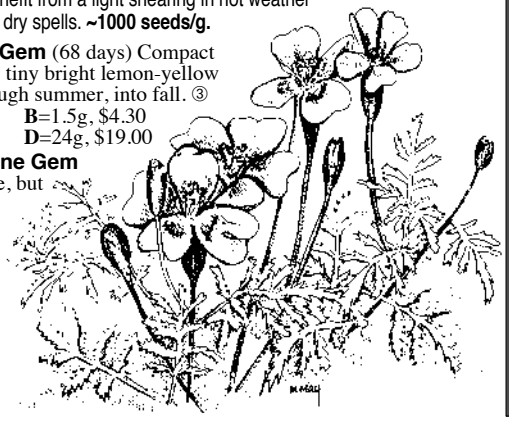


5231QS Queen Sophia (60 days) Award-winning anemone-flowered dwarf. Each plant produces many bicolored double blooms. Flowers are deep rusty orange and, as they mature, petals are edged with gold. Named for Queen Sofia of Spain. 1979 AAS, later voted second most-popular AAS flower. 10–12". ③
A=0.7g, $2.30 **B**=3.5g, $6.60 **C**=14g, $13.00

5235SP Sparky Mix Combines yellow, gold, orange and red blooms on free-flowering compact 10–12" plants. Double flowers are 2–2½" wide with smoother petals than Brocade. Darold Decker intro from the late '50s. ②③
A=1g, $1.70 **B**=7g, $3.60 **C**=28g, $5.60

Signet Marigold *T. tenuifolia*

Also known as Gems, once known as Mexican marigolds, date back to 1798. Bloom prolifically with edible ¾" single flowers with yellow centers and a citrusy fragrance. Compact mounded plants have finely cut ferny foliage. They don't need deadheading, but benefit from a light shearing in hot weather and from watering in dry spells. **~1000 seeds/g.**



5243LG Lemon Gem (68 days) Compact 10–12" plant bears tiny bright lemon-yellow flowers early, through summer, into fall. ③
A=0.5g, $2.00 **B**=1.5g, $4.30
C=6g, $7.60 **D**=24g, $19.00

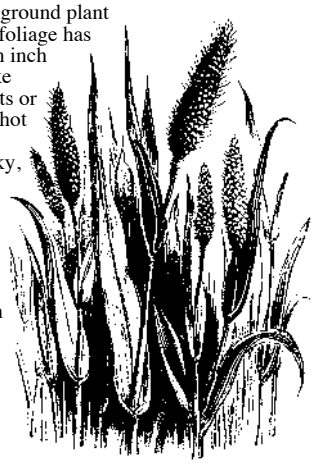
5246TG Tangerine Gem (68 days) As above, but the tiny fragrant flowers are deep orange. They make colorful tasty additions to salads. ③
A=0.5g, $2.00
B=1.5g, $4.30
C=6g, $7.60
D=24g, $19.00

5255MN Mignonette *Reseda odorata* Annual. "Mignonette should not be forgotten, on account of its delicious odor." –Breck's, 1885. Once fashionable on the balconies of Paris, popular enough to command 7 listings in Burpee's 1935 catalog. A revived interest in scent may help it regain its lost cachet. Among the most fragrant, and beloved by honeybees, its insignificant yellow-green blossoms send the enticing scent of raspberries wafting through the air. Less than a foot high, it can be grown in pots and moved for best effect; however, its scent will fade if it is removed from full-day sun. Direct seed; do not cover. Make succession plantings for continuous blooms. Prefers fertile well-drained soil and cool weather. Burpee claimed a light sandy soil brings out its most pronounced perfume. ~750 seeds/g. ③
A=1g, $1.60 **B**=4g, $3.60 **C**=16g, $7.00 **D**=64g, $14.00

ORNAMENTAL MILLET

5257FX Foxtail Millet *Setaria italica* Annual. Its graceful 3–6" golden seedheads bobbing on an August breeze attract attention even before harvest. After harvest, Foxtail Millet makes a striking counterpoint in floral displays. Customers ask for this specific strain because its heads, covered with golden-russet hairs, are softer and look less seedy than other types. Formerly *S. macrochaeta*. Plant in June, harvest mid to late August. ~450 seeds/g. ③
A=1g, $2.60 **B**=4g, $7.00 **C**=28g, $45.00

5259PM Purple Majesty Millet *Pennisetum glaucum* (120 days) Annual. This 2003 AAS award-winning pearl millet accelerated the ornamental-grasses trend. Distinguished 3–5' tall background plant with deep-purple, almost black, corn-like foliage has purple seed spikes nearly a foot tall and an inch around. The immature plumes, looking like purple cattails, can be used in arrangements or left on the plant to attract birds. Tolerates hot dry weather, likes sun and can be cultured like sunflowers. Pamela and Frank Arnosky, in *Growing for Market,* reported that it was a sensational seller. However, they cautioned that some cuts left in their packing shed for a few days turned solid yellow with pollen that had an odor like burnt antifreeze. They advised cutting the spikes immature, just as they emerge from the last leaf, to circumvent the pollen. With all the hype, the seed is exorbitantly expensive, so we pack by seed count. ~116 seeds/g. ⑤
A=6 seeds, $2.60
B=24 seeds, $8.20
C=72 seeds, $20.00



I saw a plea in one of your quotes to keep the politics out of gardening. But how can we? The personal is political — growing organic, open pollinated, open source seeds and saving them is how I rebel.
– Katie Ruppel, West Tisbury, MA

MORNING GLORY *Ipomoea* spp.

Annual. Easily grown climber with trumpet-shaped flowers provides color and shade, decorates fence or post.

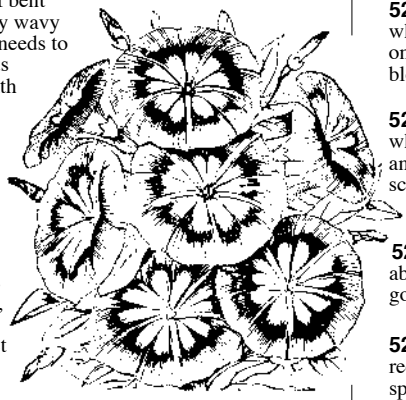
Culture: Plant with eastern exposure for best results. Nick the seeds with a file and soak overnight to speed germination. Germinates in 2 weeks at 75–80˚. Sow outdoors after danger of frost or indoors in peat pots as they resent transplanting. Overly rich soil will yield excess foliage and sparse blooms. **~25 seeds/g.**

5271FS Flying Saucers *I. nil* Seedsman Darold Decker created these gaudy 4" open trumpets just three years after the Russians sent Sputnik into orbit. Bicolor features clear white cups streaked with sky blue. The swirly blue patterns create the ethereal saucer effect that inspired its name. Can be brought inside in the bud stage for a week-long show as the amazing blossoms unfurl their patterns. Climbing vine grows 8–10'. ③

A=1.5g, $1.70 **B**=6g, $4.00 **C**=18g, $6.70 **D**=54g, $14.00

Scarlett O'Hara Alas, the color is not scarlet. *Not available in 2019.*

5274SS Sunrise Serenade *I. n.* A recently rediscovered heirloom double morning glory. I first caught a glimpse of an unstaked plant snaking along in the undergrowth of a friend's garden and was arrested by the large 1–3" ruby-red blooms with white throats. As I bent closer, I was amazed by the frilly slightly wavy extra petals. A vigorous 12–15' plant, it needs to be tied up in order to "climb." When thus displayed, the flowers contrast nicely with the heart-shaped green leaves. Often the first morning glory to bloom, also stays open longer than the singles. Packet has ~11-14 seeds. ⑤



A=0.3g, $2.20 **B**=1.2g, $6.40 **C**=6g, $15.00

5276CM Carnevale di Venezia Striped Mix *I. purpurea* Vigorous 6' climbers quite striking with their masses of white flowers, some with blue stripes, some with pink, some with both in a wide array of diverse patterns. The effect is more like a cheery carnival pinwheel than the masks at the annual Carnival of Venice. Plant them where they'll brighten up your morning. ②

A=1g, $2.00 **B**=3g, $4.20 **C**=15g, $11.50

5277KO Kniola's Purple OG *I. p.* (50 days) Beautiful glowing rich deep purple flowers vibrate against lush green foliage. Unlike most other morning glories, Kniola's starts blooming while it is only 2' tall and still vining. As the vines climb on to 8–9', the blooms continue, lasting the entire season. The deep flowers have a magenta star that radiates out from their pale pink-white throats. An heirloom discovered by Mr. Kniola at an abandoned farm in Indiana. Nicholas Lindholm acquired seed from J.L. Hudson in 1993, thence passed it on to Roberta Bailey who has been maintaining it and culling out the magenta off-types. ①

A=0.5g, $4.00 **B**=2g, $11.00 **C**=4g, $18.00

5279HB Clarke's Heavenly Blue *I. tricolor* (115 days) Classic morning glory. Intense azure blooms lighten toward center; a sun-loving vine. 12'. ③

A=3.5g, $1.70 **B**=14g, $3.50 **C**=56g, $8.00 **D**=1lb, $32.00

Seed Longevity for Herbs and Flowers

We have integrated results from several tables with our own first-hand knowledge drawn from testing old lots for germination. Seeds stored in less-than-ideal conditions will have shorter life spans. Plant name is followed by years.

achillea	2	daisy	3	nicotiana	3
alyssum	3	delphinium	1	nigella	1
amaranth	3-5	dianthus	3	oregano	2
anise	3	didiscus	3	pansy	2
aster	1	dill	3	petunia (unpelleted)	5
baby's breath	2	fennel	3	phlox	1
bachelor's button	3	four o'clock	2	poppy	3
basil	5+	gaillardia	2	sage	3
borage	5+	hollyhock	3	salpiglossis	3-5
calendula	3	honesty	2	salvia	1
campanula	3	impatiens	2	savory	3
caraway	3	larkspur	1	snapdragon	3
catnip	5	lavatera	3-5	statice	2
celosia	3-5	lavender	5	stock	3
chinese lantern	1	lemon balm	5	strawflower	2
chives	1	lobelia	3	sweet pea	3
cilantro	5+	lupine	2	sunflower	3
columbine	2	marigold	3	thyme	3
coreopsis	2	marjoram	3	tithonia	2
dahlia	2	nasturtium	3-5	zinnia	3-5

NASTURTIUM *Tropaeolum* spp.

Annual. The name literally means 'twisted nose,' from the Latin *nasus* for nose and *tortus* for twist. Edible flowers with spicy sweet fragrance lend a peppery-sweet taste to salads, with each color adding contrast and subtle variations in flavor. Round leaves also edible. Formerly used as a remedy against scurvy.

Culture: Blooms keep coming if cut, needs moisture and cool temperatures for optimal blooming. Intolerant of frost. Germinates 7–10 days at 65˚. Cover the seed. Avoid excess nitrogen, but don't relegate nasties to the worst soil. Likes full sun. Start indoors or direct seed after last frost. **~6 seeds/g.**

5280AL Alaska Mix *T. majus* (60 days) Striking variegated green and white foliage will make a formidable bush if you feed it heavily. But go easy on the nitrogen if you want to eat lots of its tangy yellow and orange blossoms. A great plant for hanging baskets. 16". ②

A=2g, $1.60 **B**=8g, $3.20 **C**=24g, $4.50 **D**=1lb, $35.00

5282EI Empress of India *T. majus* (60 days) Hailed as a "great novelty" when introduced in 1884, and still popular today. Dark purplish-green leaves and stems make a perfect background for the spicy-hot brilliant crimson-scarlet flowers that stand out in bold relief. A good contrast with other nasturtium varieties. Do not feed heavily. 16" plants. ②

A=3g, $1.60 **B**=9g, $3.60 **C**=27g, $5.00 **D**=1lb, $42.00

5288JM Jewel Mix *T. majus* (42 days) Bushy variety holds its blooms above the foliage. Early free-flowering blend of orange, yellow, red and gold. Long our best-selling flower variety. 16". ②

A=4g, $1.60 **B**=16g, $3.50 **C**=64g, $8.00 **D**=1lb, $32.00

5291TC Tall Climbing Mix *T. majus* (65 days) Tall trailing mix to 4–6' in red, orange, gold and exquisite bicolor shades. The red blossoms have a spicier taste than those of lighter colors. Plants will spread and fill in a huge space but having no tendrils cannot, strictly speaking, climb. The most prolific blossom set of any of the nasturtiums we have tried. ②

A=4g, $1.60 **B**=28g, $4.20 **C**=84g, $8.00 **D**=1lb, $30.00

5293PM Peach Melba *T. minus* (60 days) Named for the dessert—peaches with raspberry sauce—that Escoffier created to honor 19th-century operatic soprano Nellie Melba. Recommended by Eva Sommaripa and other growers who treasure its unique delicacy. Primrose-cream blossoms with pearly red centers look like miniature cut peaches with dollops of sauce. Sets its abundant blooms above the compact lily-pad foliage. ②

A=3g, $2.10 **B**=9g, $5.20 **C**=27g, $12.00 **D**=81g, $28.00

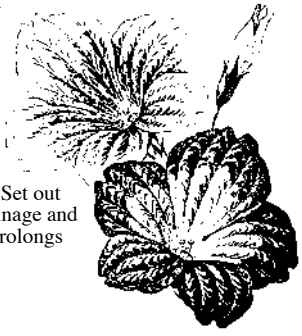
5295WB Whirlybird 7-Color Blend *T. minus* (60 days) Has large spurless upward-facing flowers borne above the foliage. Compact non-trailing plant habit. Recommended for commercial growers. 12" plants. ③

A=2g, $1.70 **B**=6g, $3.80 **C**=24g, $8.20 **D**=1lb, $52.00

5300LN Only the Lonely Nicotiana ECO *N. sylvestris* Annual. Arrived in cultivation from Argentina in 1899 and offered by Geo. B. Haskell Co. of Lewiston, ME, for a nickel per packet in 1904. Also known as Woodland Tobacco, featuring clusters of drooping tubular white blossoms that perfume the garden day and night. In dwarfing nicotiana, breeders took away its fabulous fragrance. Lonely, a stately 5', delivers the full powerful scent its more compact cousins lack. Plant it near a door or under your bedroom window where you can enjoy the aroma during the night. Germination is 10–12 days at 65–70˚. Light enhances germination. Grow on at 50–55˚. ~29,000 seeds/g. ①

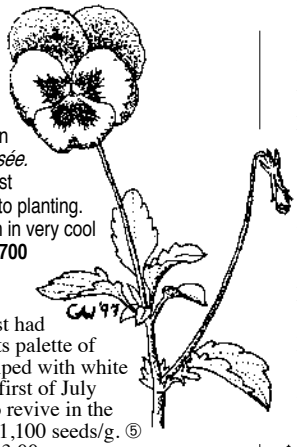
A=1g, $1.90 **B**=4g, $5.00 **C**=16g, $17.50

5303RM Royale Mix Painted Tongue *Salpiglossis sinuata* Annual from the Andes noted for its exquisite velvety texture. Popular as a cutting flower in Victorian times, it was often planted in geometric patterns in an art form known as mosaiculture. Extremely floriferous 15–20" plants produce masses of elegant 3" trumpet flowers in a broad range of colors from chocolate, red, purple and yellow to purple-orange and pale blue bicolors. Germinates in 15 days at 70˚. Likes long days, lots of light and cool nighttime temperatures (50˚) to grow on. Set out in a location with partial shade, good drainage and protection from the wind. Deadheading prolongs blooms. ~4,500 seeds/g. ④



A=0.01g, $3.30 **B**=0.05g, $9.00

PANSY *Viola* spp.



Annual or short-lived perennial. Burpee's in 1888 called the pansy "the most popular of all flowers grown from seed," and sold more than 100,000 packets per year. James Vick's Sons sold 27 different kinds and mixtures in 1895. For thoughts, remembrance, from the French *pensée*.
Culture: Old-fashioned bedding plant thrives in cool moist conditions. Start in a cool (60–65˚) place 2 months prior to planting. Cover seed to germinate. Takes about 12 days. Grow on in very cool temperatures—preferably below 50˚. Likes partial sun. **~700 seeds/g** except where noted.

See p. 92 for **5152** Johnny-Jump-Up, *V. tricolor*.

5305BS Brush Strokes *V. cornuta* As if an artist had taken a fine brush to lay delicate bright stripes on its palette of solid colors. Purple, pink, yellow and light blue striped with white and yellow strokes. Donna Dyrek's blossomed the first of July from an April 8 start. Pansies are among the first to revive in the spring. Dwarf 6" plants with large fragrant faces. ~1,100 seeds/g. ⑤
A=0.02g, $2.70 **B**=0.1g, $6.00 **C**=0.4g, $13.00

5308FS Frizzle Sizzle Pansy *V.* x *wittrockiana* The cancan dancers of the flower world, with their ruffled petticoats in a splendid panoply of colors, are making their entrance. Just the right pick-me-up after a drear mud season to put a little razzle-dazzle in your spring and early summer garden. Heart-shaped leaves on mounded 4–6" plants are covered with 3" mostly bicolor flowers, with darker whiskers and yellow eyes to dress up their array—in lemonade, orange, raspberry, blue, yellows, and white. Just imagine these edible beauties on a salad. And they're slightly fragrant too! Perennial in Zones 6-8. In a colder zone, increase the likelihood of plants overwintering by covering them with a straw mulch. ⑤ **NEW!**
A=0.02g, $3.60 **B**=0.1g, $12.00 **C**=0.4g, $30.00

5314PE Pearly Everlasting *Anaphalis margaritacea* Perennial, Zones 3-8. You may have seen these blooming from midsummer to fall in the full sun or partial shade along the edge of a field. Big clusters of 1/2" white papery flowers on 18–24" plants live up to their name and hold their pure white color without turning brown when dried. Best picked for drying before the yellow centers are visible in order to prevent an unattractive exploded look. Also use fresh in bouquets or leave outdoors to attract pollinators. Good for naturalizing in evenly moist soil but will tolerate drought. Known by the Passamaquoddy as "women's tobacco" because it is milder than Red Willow, and used for calming the mind, for headache and insomnia, and as a smudge or offering. Direct sow after last frost so that plants are 18–24" apart. ~8,000 seeds/g. ✿ ③
A=0.1g, $2.00 **B**=0.3g, $4.00 **C**=1.2g, $13.00

PETUNIA *P.* x *hybrida*

Annual. "If I were limited to one flower with which to decorate my home I would choose Petunias." –Park's Flower Book, 1934.
Culture: Start indoors at 70–75˚ and grow on at same temperature for 8 weeks before setting out after danger of frost. Do not cover seeds; light aids germination. Use loose medium and avoid overwatering.
Drought-tolerant sun lovers. **All F-1 hybrids. ~10,000 seeds/g.**

5321DD Daddy Mix Very showy grandiflora has big 4" ruffled blooms in shades of light blue, orchid, peppermint, pink, plum and strawberry with darker veins. Stunning in baskets, these uniform plants also exhibit good weather-tolerance when planted in full sun. 12–15". ⑤
A=0.03g, $3.80 **B**=0.12g, $13.50

Wave Series Petunia

Our customers have caught The Wave. Each plant carpets the ground with a 4x4' spread of vivid color. This versatile landscaping tool can be used as a low hedge, as a ground cover, or trailing from pots. Wave showed extreme drought tolerance in our trial, sailed through light frost, and bounced back after torrential rain. Although never deadheaded or cut back, the 3" flowers just kept coming and coming.
Culture: Plant in full sun where its robust performance and light fragrance can sweep you away. All varieties pelleted seed, packed by count and shipped in protective vials so none get crushed.

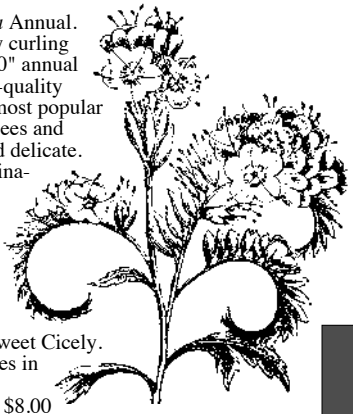
5323BW Blue Wave Suggested by Nan King of Walpole, NH. She prefers Blue Wave's plant habit to that of Purple, finding it less rangy, more floriferous, and the foliage better at covering the underpinnings. Has bluish-purple flowers. *Last year we will carry*. ⑤
A=10 seeds, $3.30 **B**=40 seeds, $11.00

5325PW Pink Wave Pink, with white throats. ⑤
A=10 seeds, $3.30 **B**=40 seeds, $11.00

Purple Wave *Not available in 2019*. Hope to have back in 2020.

5328TW Tidal Wave Silver Despite its name, more a very pale purple than silver, with darker purple veining. 2002 AAS. ⑤
A=10 seeds, $3.30 **B**=40 seeds, $11.00

5331PO Phacelia OG *P. tanacetifolia* Annual. Also called Fiddleneck. The small frizzy curling lavender-blue sprays of this bushy 18–30" annual bloom for two months and provide high-quality pollen and nectar, making it one of the most popular insectary plants for honeybees, bumblebees and syrphid flies. Phacelia honey is clear and delicate. Flowering begins 6–8 weeks after germination, though the plant needs 13 hours of daylight to bloom. Used as a cover crop or intercropped in row plantings, it can increase beneficial insect diversity and populations in gardens, fields, orchards and vineyards while suppressing weeds. It winterkills at 18˚ and can be turned under. Feathery leaves look similar to Sweet Cicely. Seed will germinate in cold soils. Thrives in dry to moist soils. ~280 seeds/g. ✿ ①
A=1g, $1.80 **B**=4g, $4.20 **C**=20g, $8.00



PHLOX *P.* spp.

Breck's sold 15 different kinds in 1885. The word phlox signifies 'a flame.' Phlox is among the most colorful flowers for summer and fall beds, borders or pots.
Culture: Start early indoors or direct sow in spring. Likes moist well-drained soil in full sun. One of the longest lasting in the vase. About the last to succumb to frost.

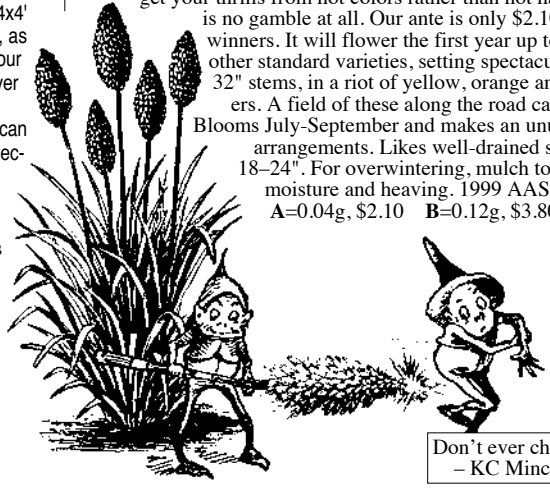
5335PL Drummondii Mix *P. drummondii* Annual. Enchanting fragrance from this 24" sprawling phlox with large umbels full of blooms in crimson, scarlet, pink, white, lavender, and bicolor combinations with dark and white eyes. ~500 seeds/g. ②
A=0.4g, $1.70 **B**=2g, $3.30 **C**=8g, $6.60

5339PH New Hybrids Mix *P. paniculata* F-1 hybrid. Perennial, Zones 3-9. Blooms from June till frost. Excellent for borders and cutflowers. Mix of white, pinks, reds and lilacs. Freeze seeds 10 days before sowing indoors, or direct seed in cold soil. Slow germinator, takes 3–4 weeks. Likes full sun. 3'. ~111 seeds/g. ③
A=0.1g, $2.00 **B**=0.3g, $4.00 **C**=0.9g, $7.20

5341PF QIS Formula Mix Pincushion Flower *Scabiosa atropurpurea* Annual. High-quality mix has brought us moderate success in restoring interest to the old-fashioned but underrated Pincushion Flower. These quilly beauties are perfect for cuts, each 2" bloom is a rounded mass of tiny florets on a long wiry stem. Harvest when blossoms are almost fully open. Also excellent for drying. Formula mix is nicely balanced, featuring purple, lavender, red, pink, white and almost-maroon. ~150 seeds/g. ③
A=0.2g, $2.00 **B**=1g, $4.00 **C**=4g, $7.50

Pinks See Dianthus, **5061**-**5066**.

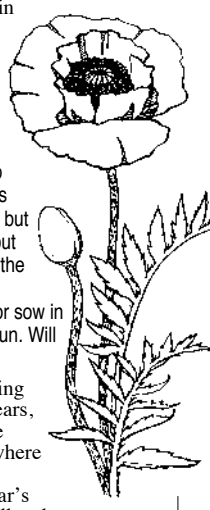
5343RP Flamenco Red Hot Poker *Kniphofia uvaria* Perennial, Zones 5-9. You won't need to build a casino to get into this game of poker. If you get your thrills from hot colors rather than hot hands, this Red Hot Poker is no gamble at all. Our ante is only $2.10 and there will be many winners. It will flower the first year up to four weeks earlier than other standard varieties, setting spectacular 8" spikes atop sturdy 32" stems, in a riot of yellow, orange and fiery red tubular flowers. A field of these along the road can take your breath away. Blooms July-September and makes an unusual accent in cutflower arrangements. Likes well-drained sunny locations. Space at 18–24". For overwintering, mulch to protect the crowns from moisture and heaving. 1999 AAS. ~450 seeds/g. ②
A=0.04g, $2.10 **B**=0.12g, $3.80 **C**=0.36g, $6.60



Don't ever change to a glossy catalog!
– KC Minck, Saint Albans, VT

5345AP Dwarf Allegro Oriental Poppy *Papaver orientale* Perennial, Zones 2-8. Fuzzy fern-like leaves, showy buds open to dazzling scarlet blooms with contrasting black eyes. Sow in June, transplant in October for flowers the following late spring. Grows 16". Long-lived, fits well with border perennials and ornamental grasses because plants go dormant after spring flowering until the leaves re-emerge in the fall. ~5,000 seeds/g. ③

A=0.05g, $1.90 **B**=0.2g, $3.60 **C**=0.6g, $8.00



POPPY *Papaver* spp.

Annual. Sensuous luxurious flowers, about 2½–3' tall. We offer two heirloom breadseed varieties especially suitable for baking. Poppies make wondrous cutflowers: choose buds that have straightened up but not quite opened. Immediately sear the cut stem with a flame and put in water. Poppies open after several hours—an austere bouquet in the evening can become a riot of colors the next morning.

Culture: Need light to germinate. Sow outside in spring after frost or sow in fall for early blooms the following summer. Thin to 9–12". Like full sun. Will self sow. **~2,000-5,000 seeds/g**.

5350EO Elka OG An unusual double-purpose poppy sporting enormous seed heads up to 1½" wide and 2" high in good years, somewhat smaller in drought. The heads are unvented, so the seed is not broadcast. From Chrenovec in central Slovakia, where families used to grow both the black Breadseed poppy and white-seeded Elka, and collect 50 kilograms of each for a year's cooking. When walnuts became widely available in stores, Elka almost completely disappeared. Lacks the distinctive flavor of the Breadseed variety but sweeter, with a more nutlike taste, none of the bitterness, and over 50% more oil content, making perhaps the best edible oil in central Europe. Plants grow 4' with white-lavender single blossoms, like calcium-rich soil, don't transplant well. For best results thin to at least 5–6" apart. Some folks tie a group of plants together for support against wind breakage. Isolate from other poppies by at least 250' if you wish to save seed. ☙1995. ①

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60 **D**=6g, $13.00

5351ZO Ziar Breadseed OG Twin to **5350** Elka bred to eliminate the vents in its large seed head so the blue seeds stay in the heads to be collected. Ornamental single pink to red petals with centers ranging from pale red through dark colors. Although the first batch of seeds had some difficulty adapting to the cold climates of Canada and Maine, Ziar has been selected over at least 20 years for better cold survival. Slovakian variety once a mainstay of the local cuisine. ☙1996. ✿ ①

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60 **D**=6g, $13.00

5353BP Black Peony We'd seen poppies in a lot of different colors, but never one like this fully double ruffled flower of the deepest purple, almost black. Strong tall stems. 2'. ③

A=0.1g, $1.50 **B**=0.3g, $3.50 **C**=1.2g, $5.50 **D**=6g, $12.00

5359DF Danish Flag According to legend, Denmark's flag came from the sky to King Valdemar II in 1219. The origins of the *Dannebrog* or Danish Flag poppy, are more obscure but predate 1888. Flag is named for the white spots at the base of the petals that form a cross in the center of the brilliant scarlet flowers somewhat mimicking the Danish flag. The lush single blooms, more than 4" across with fringed petals, sit atop 27" stems with blue-green foliage. The attractive large seedheads that follow the showy blooms are ideal for drying. ③

A=0.1g, $1.50 **B**=0.3g, $3.50 **C**=1.2g, $5.50 **D**=6g, $12.00

5366QO Drama Queen OG I cringed when I first heard this name—surely another example of the hyperbole of those shameless variety-namers. Not this time. It's everything its name suggests, including having its photograph all over the internet. Petals are deeply cut with irregular pointy fringes, and shaded with deep purple and violet near the center which morphs to vivid raspberry toward the edges. Yellow-green centers with prominent creamy-yellow anthers accentuate the 4–5" flower. Either gorgeous or hideous, depending on your point of view, but undeniably dramatic. 3' tall. ①

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60 **D**=6g, $13.00

5371RO Fluffy Ruffles OG A beautiful color selection with mostly pink on the outer two thirds of the petal edge with a slight purple blush in the middle and on the petal backs. Double, but not a full pompon; the fringes on the petal ends give it a spider-aster or cactus-dahlia look. The grower enthuses about how much he enjoys a field of these in full bloom. Reblooms after deadheading, though the blooms are smaller. 3'. ① **BACK!**

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60

5374LB Ladybird Not a reference to Lady Bird Johnson, Ladybird is instead British for ladybug: the four black dots in the center of these fire engine–red blooms make a fanciful resemblance to the beloved beetle. Compact 1½" delicate single blooms atop wiry 15" stems. This cottage variety, great for edging the flower garden, dates back to 1876. Bloomed June 30 from a May 2 planting. ③

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60 **D**=6g, $13.00

5377LO Large Lavender OG Passed along to Jeanne Griffin by a German friend, these tall poppies bloom in July with 2½–3" single flowers that have exquisitely shaded and fringed petals. Long blooming period. Large 1" seed pods can be used in dried arrangements. ①

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60 **D**=6g, $13.00

5378SO Scarlet Peony OG Large 5" bright scarlet blooms make a stunning show in the garden, especially en masse. Fully double blossoms tightly packed with silky deeply fringed petals draw attention in much the way a cheerleader's pompons do. Very floriferous from mid-August till frost. 2–3' tall. ①

A=0.1g, $1.80 **B**=0.3g, $3.80 **C**=1.2g, $6.60 **D**=6g, $13.00

5379SH Shirley Double Choice Mix Also known as Corn Poppy, was called Ghost or Fairy Poppy early in the century. Elegant semi-double blooms all summer in shades of pink, rose, salmon, scarlet and white. The name Shirley refers to the town in Surry, England, where the Rev. Henry Wilkes originally raised the variety. It was relatively new in 1890 when Hallock's Famous Long Island Seeds said it was "conceded by all to be still the finest Novelty that we can give you this spring. The flowers are like fairy work…so silky and tissue-like…Bending and trembling with life-like beauty, the surface is a perfect shimmer of light and color." 2½' tall. ②

A=0.7g, $1.60 **B**=7g, $3.40 **C**=28g, $6.00

CALIFORNIA POPPY *Eschscholzia californica*

Annual. The state flower of California is excellent for borders, rock gardens, bedding. Likes full sun. Do not transplant. Direct seed in May after soil has begun warming. Make succession plantings for blooms all summer.

5381JB Jelly Beans These Jelly Beans are vibrant in their bright irresistible colors: bubblegum pink, white, orange, raspberry red, pale orange—some striped, some doubled—against feathery silver-blue foliage. Their nectar attracts bees and hover flies. From an April 11 start, Donna Dyrek's first blooms were on Bastille Day. Still bloomed after a 27° mid-October frost. 8–12" tall. ~700 seeds/g. ✿ ⑤

A=0.1g, $2.20 **B**=0.4g, $4.80 **C**=2g, $13.00 **D**=8g, $30.00

5385QO Dara Queen Anne's Lace OG *Daucus carota* (70 days) We're kissing Purple Kisses goodbye; there's a new Queen in town—Dara. This time, rather than starting from a carrot, a sharp-eyed gardener noticed the variation in Queen Anne's Lace and selected from there. And though Dara sports the 3–5" lacy umbels typical of the wild flower, it's the color that crowns this queen—ranging in shades from deep rich purple to dark wine red, soft pinks and an occasional white, with many interesting variations in the color patterning. The 3' plant bearing 7–15 sturdy upright stems makes a regal and long-reigning appearance in the cottage garden while attracting pollinators. Also appreciated in bouquets as a long-lasting filler that provides a lacy softening effect; when cutting for bouquets, wait until the stems have stiffened to avoid a droopy head. ✿ ① **NEW!**

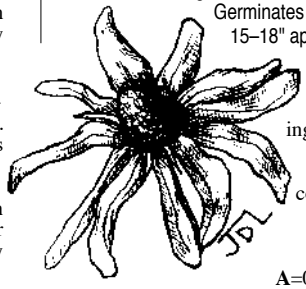
A=0.1g, $3.00 **B**=0.5g, $9.00 **C**=3g, $40.00

Queen of the Meadow See **5150** Joe Pye Weed.

RUDBECKIA *R.* spp.

Named for Olaf Rudbeck (1660-1740), professor of botany at Uppsala in Sweden and a teacher of Linnaeus. Improved versions of these rugged North American native black-eyed Susans outstrip their wild counterparts in size and color.

Culture: Drought-tolerant. Start indoors at 70° and do not cover the seed. Germinates in 14–21 days at 70°. Transplant after danger of frost at 15–18" apart. Likes full sun, good drainage.



5393GS Goldsturm *R. fulgida* Perennial, Zones 3-10. Domesticated cousin of the beloved black-eyed Susan, Goldsturm offers a profusion of shining golden-yellow flowers with dark central cones in August and September. Transplants well and has much larger flowers—up to 5" across—than the common wildflower. The 2' plants have long strong stems ideal for cutting and flowers last long in the vase. Start indoors 8–10 weeks before last frost. ~1,000 seeds/g. ✿ ⑤

A=0.1g, $2.30 **B**=0.4g, $4.40 **C**=1.2g, $7.70

5395GD Gloriosa Daisy *R. hirta* Annual. Impervious to the hottest sun and the poorest soils, these workhorses reward even the novice with nonstop flowers from late July until fall frosts. Flowers up to 6" on 2–3' stems have the hues of mixed sunflowers: yellow, gold, orange and reddish brown, surrounding chocolate-brown centers. They enhance the border and can be brought inside as cuts. Transplant or start seeds directly outdoors as soon as the ground can be worked. Space about 1' apart. ~1,800 seeds/g. ✿ ③

A=2g, $1.80 **B**=6g, $3.80 **C**=24g, $8.00 **D**=72g, $19.00

5397GL Goldilocks *R. h.* (86 days) Annual. Brighten bouquets and beds with these 4" golden-orange blooms with deep-set brown eyes. Long strong stems set on 24–30" plants make this an outstanding cutflower. Enough are fully double to give the effect of a patch of chrysanthemums. ~1,800 seeds/g. ✿ ③

A=0.1g, $2.00 **B**=0.3g, $4.00 **C**=1.2g, $9.00

5399PS Prairie Sun *R. h.* (88 days) Annual. Sixteen pointy golden petals with light yellow tips encircle a subtle green center. Flowers are very large and distinctive. Branching 24–30" plants have long stems, ideal for cutflowers. Prairie Sun won both an AAS and a Fleuroselect medal in 2004. Color-coated seed for improved visibility. ~1,200 seeds/g. ✿ ②

A=0.02g, $2.30 **B**=0.1g, $6.00

SALVIA spp.

From the Latin *salvere*, 'to heal.' Wide-ranging genus with more than 900 species throughout the world. In the Northeast they range from tiny lawn weeds to showy ornamentals to culinary sage. Members of the mint family, most have square stems and blue or lavender flowers with prominent lips.

Culture: Like full sun and dry conditions, require good drainage. In our climate, all should be started indoors.

See also sages **4664–4666**.

5406BB Blue Bedder *S. farinacea* Perennial, Zones 8-10, grown as an annual. True blue flower spikes are abundant for weeks on bushy 3' plants. Grey-green foliage. Light aids germination. Start indoors in warm location (do not cover seed) 4–6 weeks before last frost, keep fairly dry for best foliage color, and transplant outdoors after danger of frost. ~900 seeds/g. ✿ ③

A=0.2g, $1.70
B=1g, $4.00
C=4g, $8.00

5411GS Gentian Sage *S. patens* Perennial in Zone 8-10, grown as an annual. Magnificent blossoms clear and bright, one shade lighter than cobalt blue. Each flower on the monkshood-like spike has a top petal "hood" that lunges across the pendent lower petals. Flower spikes 12–15" long, good for cutting. Start indoors 12–14 weeks before setting out. 2½' plants. ~130 seeds/g. ✿ ③

A=0.1g, $2.00 **B**=0.3g, $4.00 **C**=1.2g, $7.00

5417SS Seascape *S. f.* F-1 hybrid. Perennial, Zones 8-10, grown as annual. Even from way across the garden, this stunning mix of blues and silver grabs your attention, be the day foggy and overcast or bright and sunny, whether you are near the coast or not. Early flowering blossoms on compact branching 13" plants excel whether clumped by themselves or mixed with others. Best in full sun, tolerant of poor soil and some drought. Gazing at them in Donna's garden, well inland, I imagined I was sailing on Penobscot Bay admiring the alternating waves of color. Start seeds indoors 10–12 weeks before last frost for best bloom. ~1,050 seeds/g. ✿ ④

A=0.1g, $2.20 **B**=0.3g, $4.00 **C**=1.2g, $10.00 **D**=6g, $33.00

5419TS Tricolor Salvia *S. viridis* Annual. Also known as Painted Sage. This prolific little beauty is splendid as a dried flower or a filler in fresh arrangements. Although its leaves are entirely green, its name comes from its white and blue flowers set off by large pink-to-purple bracts. Easily air-dried, it will remain very colorful, and flowers until frost if old blooms are removed. 18" stalks. Start indoors 4–6 weeks before last frost. Needs well-drained soil. ~350 seeds/g. ✿ ③

A=1g, $1.90 **B**=4g, $4.00 **C**=12g, $7.00

5423SO Northern Sea Oats OG *Chasmanthium latifolium* Perennial, Zones 4-10. We admire its 2' strong arching stems dancing with airy green flattened seedheads. Lovely in arrangements from June to September, after which its bamboo-like foliage changes from green to a rich brown, providing winter contrast. The dried seedheads make interesting accents in handmade paper. Self-sows freely if not deadheaded. Likes moist conditions and is a lighter green when grown in full sun. ~260s/g. ③

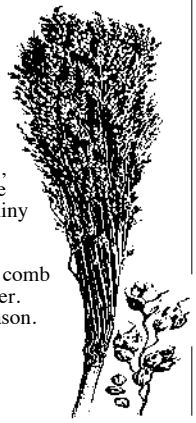
A=0.2g, $1.90 **B**=1g, $5.00 **C**=4g, $11.00

5431RS Rocket Mix Snapdragon *Antirrhinum majus* (120 days) Perennial in Zone 7-10, grown as an annual, and occasionally overwinters even in central Maine. F-1 hybrid always very popular with commercial growers. Its long stems and vibrant colors—pink, red, yellow, orange, white and orchid—on 2–3' plants make Rocket the standard snapdragon for cutting. For local production of cuts, harvest when more than half the flowers are open. Will last 5–8 days. Withstands light fall frosts. Sow indoors at 65–75°. Do not cover the seeds. Grow on at 60°; warmer temperatures cause leggy transplants. Set out after danger of frost, spacing at 9–12". ~5,000seeds/g. ⑤

A=0.025g, $3.00 **B**=0.125g, $6.50 **C**=0.5g, $22.00

SORGHUM *S. bicolor*

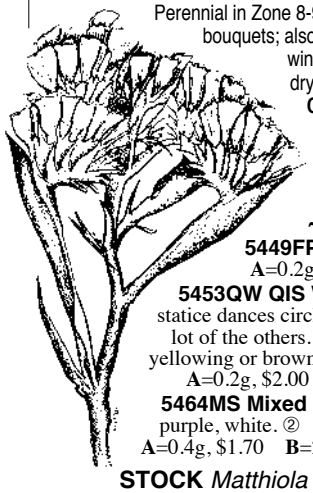
Annual. Originally from Africa, sorghum is cultured in the South for the sweet syrup of its stalks. In the floral trade it is used as a focal point for large arrangements.



5437BR Red Broom Corn (105 days) Not a true corn, broom corn looks and grows like corn but develops no ears, instead producing a tall spray of seed heads at the top of the plant in lieu of a tassel. These 2–3' sprays are laden with shiny red ⅛" seeds that birds love. Incorporate seeds into edible bird-feeder wreaths or leave sprays intact to add variety to traditional fall decorations. To make natural straw brooms, comb seeds out of the dry stalks and tie the seedless heads together. Stalks, generally 7–9', will grow up to 10' in an optimal season. ~48 seeds/g. ②

A=4g, $1.80 **B**=12g, $3.60
C=36g, $6.00 **D**=180g, $16.00

STATICE *Limonium sinuatum*



Perennial in Zone 8-9, grown as an annual. Faithful standby in everlasting bouquets; also good in fresh arrangements. Reaches 2–2½' on stiff winged bright green stems. Flowers may be gathered for drying many times throughout summer.

Culture: Seed is rubbed for easier germination, which takes 5–14 days at 70°. Some light should reach the seed. Vernalize seedlings at 50–55° until they reach the 5-leaf stage, then increase temperatures to 60–70°. Grow in full sun. Tolerant of dry conditions. **~300 seeds/g.**

5449FP QIS Purple Bright violet. ⑤

A=0.2g, $2.00 **B**=1g, $5.00 **C**=4g, $9.00

5453QW QIS White Like tutus in the ballet, this double white statice dances circles around all the others—and we've looked at a lot of the others. 2½' stems bear clean white full flowers with no yellowing or browning. A classic. ⑤

A=0.2g, $2.00 **B**=1g, $5.00 **C**=4g, $9.00

5464MS Mixed Colors (115 days) Mix includes lavender, rose, purple, white. ②

A=0.4g, $1.70 **B**=2g, $3.50 **C**=6g, $7.00 **D**=30g, $18.00

STOCK *Matthiola incana*

Annual. Old-fashioned bedding plant formerly known as Gilliflower, with multiple spikes of usually double flower clusters. Genus is named for Pierandrea Mattioli, a 16th-century Italian botanist, while *incana* means 'hoary' or 'light grey,' referring to its soft grey leaves. Good in beds, borders and containers. **Culture:** Tolerates frost to around 26°. For earlier blooms, sow indoors at 60–65° 6 to 8 weeks before setting out after danger of frost. Likes moderately fertile moist well-drained soil, full sun. Stocks are in the Brassica family; for good rotation, don't plant them where you recently had brassicas or follow them with members of that family. **~550 seeds/g.**

5475VM Vintage Mix Fragrant mix of pink, lavender, red, rose, peach, yellow, copper and white bred for larger flowers and early bloom. About half will have fully double blooms. Sturdy well-branched 15–20" plants. ⑤

A=0.1g, $2.50 **B**=0.5g, $7.00 **C**=2g, $15.00

STRAWFLOWER *Xerochrysum bracteatum*

Annual. Formerly Helichrysum. The freeblooming strawflower is good for border color and excellent for drying. Monstrosum varieties grow 30–40" tall, have 2–2½" fully double flowers. **Culture:** Grow in full sun. Gather blossoms before fully opened. Likes warm weather but will bloom into fall. Germinate at 70–75°; grow on at 65–70° days and 60° nights. Do not overwater. Transplant in 6 weeks at 12" spacing. **~1,300 seeds/g**.

5483FB Monstrosum Fire Ball Bright red. ③

A=0.2g, $1.70 **B**=1g, $3.80 **C**=5g, $6.00

5488MX Monstrosum Mix Hot pink, light pink, white, gold and deep rose. ②

A=0.33g, $1.60
B=7g, $3.60
C=28g, $6.60

This year's resolution is to join the coop, even if you are in Maine and I'm in North Carolina. Keep up the great work!
– Don Boekelheide, Charlotte, NC

SUNFLOWER *Helianthus annuus*

Annual. Sunflower remains have been found in the Tabasco region of Mexico dating back more than 6,000 years. Prized for their seeds by humans and birds, and for cutflowers by market growers, sunflowers also add a lighthearted touch to gardens.

Culture: Easy to grow. Start indoors 3–4 weeks before last frost at temperatures of 65–75° or direct sow after frost, 3 to a pocket. Thin to best plant, 1' or more apart. Rich friable soil yields tallest plants; drought stunts growth. Will readily self-sow; for some fun, leave a few volunteers in strategic locations.

Varieties open-pollinated unless otherwise indicated. All varieties have pollen unless noted otherwise.

See also **5906** Hopi Dye sunflower, p. 101.

5599SS Sunflower Sampler Our third-best seller among flowers. We mix seed for a half dozen or so varieties into one package so you can create a lovely display for a buck ninety. No dwarfs or mammoths. Tim Brown of Rutledge, TN, says, "I love the mixed packets. I've tried to calculate the joy/cost ratio of the… Sunflower Sampler. Always a knockout—and how do I add in the value of the joy they brought to my neighbor who had never seen darker sunflowers? I love the range of seed sizes in the sunflower packets." 25-30 seeds/g. ①②③ ✿
A=1g, $1.90 **B**=3g, $4.00 **C**=9g, $8.00 **D**=90g, $33.00

5500AO Autumn Beauty Mix OG (70-90 days) This 6–8' multibranching beauty is always a top seller. Produces a lovely mixture of earthen shades, petal colors ranging from bright yellow to bronze and purples. Most have a characteristic red ring enclosing a black center. Blossoms 4–6" across are perfect as the center of giant flower arrangements. ~30 seeds/g. ✿ ③
A=1g, $1.70 **B**=4g, $3.30
C=28g, $8.00 **D**=1lb, $68.00

5503FT Fantasia F-1 hybrid. Stately 4–5' stalks bearing 4–8" perfectly round **pollen-free** flowers. The best of 16 varieties in CR's grow-out. He noted a perfect blossom that opened with the month of September and was most gorgeous on Sept. 8. It was 5" across, yellow-orange with a striking dark brown center. Fantasia is a formula blend with colors ranging from white to darkest red, with double and semi-double flowers. ~22 seeds/g. ③
A=1g, $2.30 **B**=2g, $4.20
C=10g, $14.00 **D**=40g, $33.00

5507FL Florenza Attracted many comments in past sunflower trials at Common Ground Fair. Stunning brown-centered 6" flowers in maroonish red with yellow tips and a hint of yellow around the center. Mixes well with other sunflowers; makes the whole bouquet pop. 3½' tall. ~40 seeds/g. ✿ ②
A=0.5g, $2.20 **B**=2g, $6.00
C=8g, $10.00 **D**=24g, $24.00

5509GH Green Heart F-1 hybrid. Stole the show and stole my heart with its bold display in my back bed in Colrain, MA. Had I planted them close to the road the golden-yellow blooms with their amazing 4" lime-green centers would have stopped traffic. These make compelling cutflowers and are **pollen-free**. Tall straight single stems grow up to 5'. ~15 seeds/g. ②③
A=1.2g, $3.30 **B**=2.4g, $6.00
C=12g, $18.00 **D**=36g, $46.00

5512JK The Joker (60 days) F-1 hybrid. A bicolored **pollen-free** beauty with two rings of petals. An interior short yellow fringe resembling eyelashes radiates from the brown disk and accentuates the big orangy-maroon yellow-tipped outer petals. Rated among the best sunflowers for cutting by horticulturalists at the U of Florida. Mottled red stalks grow 5–7' with multiple branching. ~22 seeds/g. ③
A=1g, $2.30 **B**=2g, $4.00
C=6g, $9.00 **D**=1oz, $21.00

5514LM Lemon Queen Luxuriant 8" blooms with lemon-yellow petals surrounding striking solid brown centers. Although it can grow up to 10' tall in rich soil, its powerful stems do not lodge. Likes high fertility; makes shorter stems and narrower petals in average soil. Not early; bloomed for Donna Dyrek in late August. ~20 seeds/g. ✿ ②
A=1g, $1.60 **B**=5g, $3.60
C=20g, $6.00 **D**=1lb, $60.00

5518GS Mammoth Grey Stripe (120 days) A traditional variety of giant (usually 6–12') single-stem sunflower with large seed heads. The one to grow if you want to eat the seeds or plant a maze. Beloved by both birds and kids. ~7 seeds/g. ✿ ②
A=14g, $1.90 **B**=56g, $4.20 **C**=224g, $11.00 **D**=896g, $32.00

5521MR Moulin Rouge (65 days) F-1 hybrid. A favorite among commercial growers for its color, though not all stems are long enough for cutting. 5–6' multi-branching stems topped by gorgeous 5–7" dark red **pollen-free** blossoms, somewhat short-lived. Burgundy petals become almost black close to the disc. The Moulin Rouge was a nightclub in Paris where Toulouse-Lautrec created much of his work. This sunflower would make a fine subject for such an exuberant artist. ~15 seeds/g. ③
A=1g, $2.10 **B**=2g, $4.00 **C**=10g, $7.00 **D**=40g, $25.00

5533RE Ruby Eclipse (55 days) F-1 hybrid. Ruby-red petals with lemon tips are a vivid addition to any collection of sunflowers. The gorgeous **pollen-free** 4–5" flowers with dark centers sometimes shade into pink. 6' branching plants. ~20 seeds/g. ③
A=1g, $2.20 **B**=2g, $3.50 **C**=10g, $11.00 **D**=40g, $30.00

5536SG Schnittgold Handsome single-headed 5' sunflower. The center's double center ring surrounded by deep yellow petals makes a striking display. The inner pollen ring is black and flat, surrounded by an auxiliary ring of brown. *Schnitt* means 'cut' in German; with 8–10" blooms, this variety makes a superb cutflower. Customer Karen Pratt points out that Schnittgolds, when mature, get a hollow in the center—perfect for making sunflower bird wreaths. ~20 seeds/g. ✿ ②
A=1g, $1.80 **B**=3g, $3.60 **C**=12g, $7.00 **D**=60g, $24.00

5539SO Selma Suns Mix OG Trialer Donna Dyrek rates these her favorite sunflowers for their fragrance, beautiful diversity and plethora of polyheading 6" blooms. Selma's heads have small dark centers, pointed petals, and display various hues and shades including yellows, golds, maroons and reds. Dyrek reports that Selma "flowers forever if the squirrels don't rip off the heads." 6–7' tall. ~50 seeds/g. ✿ ①
A=1g, $1.90 **B**=3g, $4.00
C=12g, $8.00 **D**=60g, $22.00

5542SO Soraya OG (80 days) The first sunflower ever to win an AAS (2000), Soraya impressed the judges with its luminescent deep orange petals, contrasting dark mahogany center disks, and sturdy branching habit. The latter accounts for its astonishing productivity, up to 25 4–6" blooms per plant, borne on stout 20" stems, perfect for cutting. Almost **pollenless**. 6' plant spreads 2–3'. ~50 seeds/g. ①
A=0.5g, $2.00 **B**=4g, $7.00
C=16g, $20.00 **D**=64g, $60.00

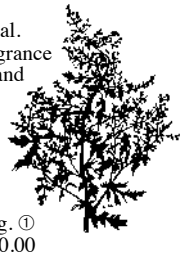
5545SM Summer Sensation (65 days) Vibrant 8" flowers, yellow surrounding a dark disk, on 5' plants. Can be grown as a single stem or pinched to branch out. Seedhead can be crafted into those decorative natural birdfeeders—if you don't snack on the seeds first. ~6 seeds/g. ✿ ③
A=2g, $1.80 **B**=6g, $3.80
C=30g, $10.00 **D**=1lb, $110.00

5555VI Vanilla Ice *H. debilis* The closest we have seen to a white-petaled sunflower. Though their true color is more cream or pale yellow, the petals make a great contrast to the rich dark disk in the center. Superior to the better-known Italian White in our trial. Wini Noyes advises to "start really, really early and don't transplant until they are very strong." Polyheaded with 5' stalks, 3–4" blossoms. ~140 seeds/g. ✿ ③
A=1g, $1.80 **B**=3g, $3.80
C=12g, $7.00 **D**=60g, $22.00

Fedco staffer Elizabeth Smedberg trellissed her Lemon cucumber vines up Mammoth Grey Stripe sunflowers. She needed a fruit picker to get the highest cuke! Back at work in the fall she heard that co-worker Carol Doyle had done the same thing! The beauty and practicality of the simple companions at the entrance to the garden won her heart.

Pollen or pollen-free? Although flower arrangers often eschew sunnies with pollen, Eliza Lindsay of Portland, OR, speaks for our pollinators: "Sunflowers that produce pollen are my favorite. They feed the bees first and later the birds." She says to grow sunflowers for cutting and to feed your pollinators, too, you must allow some of the flowers to remain uncut to complete their life cycle. Branching varieties are tops for this purpose since taking cuts encourages branching.

She offers tips for handling harvest and post-harvest for varieties with pollen. "The trick to sell them is to harvest prior to pollination. Once pollinated, flowers begin to senesce. Harvest when the petals are fully colored, clearly visible, but unexpanded and wrapped around the flower head. Harvest with long stems set in clean water in a cool dark place. Change water daily and recut stems as necessary. They will fully open in a few days, produce pollen in the vase, but have a long vase life."

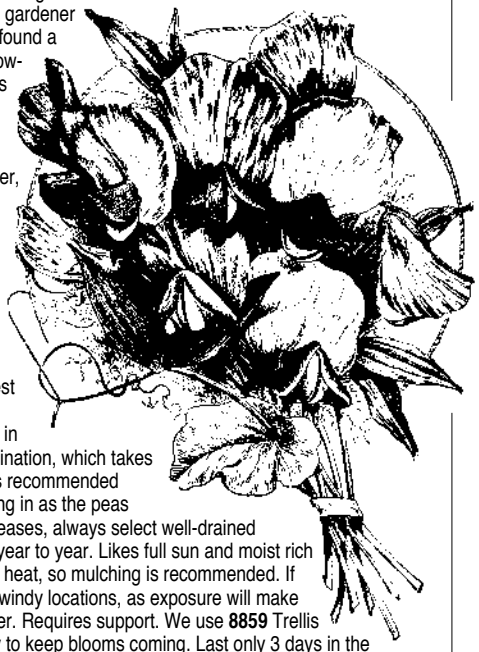


5603AO Sweet Annie OG *Artemisia annua* (120 days) Annual. Also known as Sweet Wormwood. We associate its pungent fragrance with the Common Ground Fair where so many vendors offer it and where we sell more seed than for any other item. John Pino has brought it to the Fair Farmers' Market by the trailerload. Sweet Annie grows up to 5', with light green leaves valued for everlasting wreaths that emit their distinctive redolence all winter. Used in China, where it's known as *qing hao*, as an antimalarial and antimicrobial. Reseeds itself vigorously. Seed must be frozen for 2 days, then germinated in light. ~250 seeds/g. ①
A=0.2g, $1.90 **B**=0.6g, $4.00 **C**=4.8g, $9.00 **D**=24g, $30.00

5611PP Perennial Sweet Pea *Lathyrus latifolius* Zones 3-10. The traditional English cottage sweet pea, grown by Jefferson in 1771, thrives in cool climates, loves sun and climbs 6'. Useful as a screen. Comes in shades of rose, white and pink in big clusters. Good cutflowers. Soak seeds up to 24 hours before sowing outdoors in early spring. Can take 3–4 weeks to germinate. ~20 seeds/g. ②
A=1g, $1.70 **B**=3g, $3.50 **C**=12g, $6.00

SWEET PEA *Lathyrus odoratus*

Annual. Native to Sicily, first domesticated around 1699 when amateur botanist and monk Father Francis Cupani shipped seed for the variety that bears his name to a hothouse grower in England. In the late 1800s extensive breeding work, especially by Henry Eckford, expanded the range of available colors. Around 1900 Silas Cole, gardener to Earl and Countess Spencer, found a sport with much larger ruffled flowers but less scent than Eckford's varieties. It created a sensation when it was exhibited in 1901. From this variation derive all modern strains including Spencer, Cuthbertson, Knee-High and Mammoth. As interest in fragrance revived, Bodger Seeds Ltd. obtained as many of the pre-Spencer varieties as possible and created Old Spice Mix in the 1970s.



Culture: Soak seeds for 12–24 hours prior to sowing. For earliest blooms, sow indoors 2 months before setting out, or sow direct in spring. Need darkness for germination, which takes 10–21 days at 60˚. Old catalogs recommended sowing in a 4–5" trench and filling in as the peas grew. To reduce root fungal diseases, always select well-drained locations and rotate them from year to year. Likes full sun and moist rich soil, but many perform poorly in heat, so mulching is recommended. If you are growing for cuts, avoid windy locations, as exposure will make plants stockier and stems shorter. Requires support. We use **8859** Trellis Plus. Harvest flowers frequently to keep blooms coming. Last only 3 days in the vase, but perfume the air incomparably. Give your love a bouquet of these!
~10 seeds/g.

Perennial sweet pea is above.

5614AM America An antique striated variety, arresting both to eyes and nostrils. Each blossom contains subtle variations of bright reds with creamy white streakings. Heavily perfumed. Looks lovely next to Cupani. First offered in 1896 by Morse-Vaughan. Vines grow to 3'. ✿ ③
A=2g, $1.90 **B**=8g, $5.00 **C**=24g, $10.00 **D**=120g, $30.00

5620BK Black Knight One of 115 varieties Eckford exhibited at the Crystal Palace in 1900, bred in 1898. Highly scented deep maroon flowers tolerant of heat. 5–6' vines. Annual. ✿ ③
A=2g, $2.30 **B**=8g, $6.00 **C**=24g, $11.00 **D**=120g, $46.00

5623CU Cupani Oldest and among the most fragrant of all sweet peas. Celebrated its 300th birthday in 1998 amidst a surge of renewed interest. Named for the Sicilian monk who found these bicolors growing wild, Cupani combines deep maroon-purple upper petals with deep violet-blue lower petals. Grow Cupani for enticing intoxicating aroma. 5' vines. ✿ ③
A=2g, $1.90 **B**=8g, $5.00 **C**=24g, $10.00 **D**=120g, $30.00

5626KH Knee-High Mix Semi-dwarf 20" bush-type plants need no support, produce full-length stems. Mix includes chianti, pink, blue-violet and lavender. ✿ ②
A=2g, $1.90 **B**=8g, $5.00 **C**=24g, $10.00 **D**=120g, $30.00

5629MM Mammoth Mix (75 days) 4–6' staking variety. The best tall mix in our many gorgeous trials. Though temporarily slowed by heat waves, revives during each cool spell and never stops blooming from July to September. Long stems make ideal cutflowers. Mixture of crimson, scarlet, white, lavender, deep rose, medium blue and pink. The purples and reds are the most fragrant. Year after year the least finicky and most dependable performers in heat. ✿ ③
A=2g, $1.50 **B**=8g, $3.00 **C**=24g, $6.00 **D**=448g, $48.00

5632MC Mrs. Collier A white sweet pea with real fragrance! We thank Marilyn Barlow of Select Seeds in Union, CT, for bringing it to our attention. even in those hot humid nights the heavenly blooms last and exude way more scent than the whites in the Mammoth Mix. introduced in 1907 by Dobbie & Company. 5–6' vines. ✿ ③
A=2g, $1.90 **B**=8g, $5.00
C=24g, $10.00 **D**=4oz, $30.00

5634PO Painted Lady OG Back in 1737 a naturally occurring mutation was noticed in a sweet pea. That plant became the first named sweet pea variety, Painted Lady, for her rose and pastel pink rouging on a cream base and her pleasantly scented company. This heat-tolerant bicolor is sure to entice you. ③
A=2g, $1.90 **B**=8g, $5.00 **C**=24g, $10.00

5635MS Streamers Mix (60 days) The Streamers are known in the trade as "flakes" for the boldly streaked white patterns rippling on a mix of colors—blue, lavender, pink, purple, chocolate, orange and scarlet. With its good stems, huge blossoms, abundant fragrance and surprising longevity as a cutflower, this 2002 introduction was a real coup for pre-eminent New Zealand breeder Keith Hammett. Over 5' tall. ✿ ③
A=2g, $1.90 **B**=8g, $5.00 **C**=24g, $10.00 **D**=120g, $30.00

5643CT Creeping Thyme *Thymus serpyllum* Perennial, Zones 3-10. Also known as Mother-of-Thyme or Brotherwort. Creeping sweet-scented ground cover with purple flowers good in rock gardens, between stepping stones or on dry slopes. Likes good drainage, full sun and alkaline soil. Plants grow slowly from seed, may be started indoors two months before planting, or outside in early spring or fall. Sow thickly, do not cover seeds, requires light to germinate. 2". ~6,290 seeds/g. ③
A=0.1g, $2.00 **B**=1g, $4.00 **C**=3g, $7.00 **D**=30g, $30.00

Culinary Thyme is **4687** on p. 84.

TITHONIA *T. rotundifolia*

Annual. Also known as Mexican Sunflower. Attract butterflies with these tall floriferous beauties. The dressy blooms often exceed 4" across and continue over a long season.

Culture: Heat-loving plant closely related to the zinnia. Sow outdoors after danger of frost in 70–85˚ soil, or start indoors 6 weeks before last frost date. Tithonia sulks in the cold so don't bring it out too soon.
~100 seeds/g.

5647GF Goldfinger Bond with Goldfinger! 4' tall with bright orange 3–4" blooms comparable to Torch's. Upright and uniform habit, more dwarf than Torch, yet with nearly as much charm and greater versatility. ✿ ③
A=0.2g, $1.70
B=0.6g, $3.60
C=1.8g, $6.20

5649TH Torch (120 days) Stately 6' plants with velvety dark green leaves bear scarlet-orange 4–5" blooms that attract hummingbirds and monarch butterflies. My fondness for this showy flower is shared by our customers. 1951 AAS. ✿ ③
A=0.2g, $1.70 **B**=0.6g, $3.80 **C**=7.2g, $7.00 **D**=28.8g, $10.00

5661PV Purple Top Verbena *V. bonariensis* (90 days) Perennial in Zone 7-10, grown as an annual. Don't confuse this free-flowering Verbena with the hybrid dwarf bedding plant. Proud strong 3–4' stems almost without leaves topped with vibrant purple flowers that thrive in heat and bloom from July to October. Makes an ideal cutflower and mingles beautifully with other tall border plants. Hillary Nelson suggests combining with cosmos, lavender, purple zinnias and lemon mint. Attracts butterflies. Extremely drought-resistant. Erratic germination may be helped by 3–5 weeks' stratification prior to sowing. Start at temperatures of 70–75˚, grow on at 55–62˚. Keep growing medium fairly dry. Cutflower customers love it, but its tendency to shatter annoys some growers. ~4,000 seeds/g. ✿ ③
A=0.1g, $2.00 **B**=0.4g, $6.00 **C**=2g, $12.00

5663VI Ideal Florist Mix Verbena *V. hybrida grandiflora* Annual. Multiple whorls of many 5-petaled flowers spiral centrally like little umbrellas on sturdy 12" stems. The 3" umbels come in shades of deep magenta, white, lilac, blue-violet and fuchsia, all accentuated by white throats. The multi-branching semi-sprawling habit makes this mix wonderful for beds and bouquets. ~400 seeds/g. ③
A=0.2g, $1.70 **B**=0.6g, $4.00 **C**=3g, $12.00

ORNAMENTAL WHEAT *Triticum spp.*

See the Wheat on pg 132 to learn more about winter and spring wheats.

4322BO Black Eagle Spring Wheat OG *T. aestivum* (95 days) A stunning dual-purpose spring wheat, standing 3' tall in the field with black and white glumes and crisp 3–4" black awns that wowed Nikos the first time she saw it. Harvest early for best ornamental value as its striking color weakens the longer the plants stand in the field. Later, as the kernels fill out and redden, gather the sheaves to thresh, winnow and grind. A 6-row wheat with good straw strength and average yield. Seed originated from Thumbs Heath of the Seed Savers Exchange ~20 seeds/g. ①

A=7g, $2.10 **B**=28g, $6.00 **C**=112g, $12.00

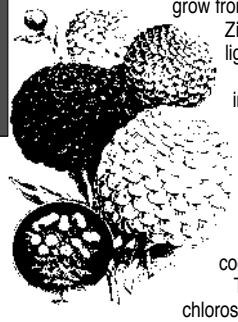
4324UO Utrecht Blue Spring Wheat OG *T. durum* This may be the world's most beautiful wheat. It hardly matters that Utrecht Blue is hard to thresh because it is too beautiful to eat and is used instead for wheat weaving and flower arrangements. Features four rows with blue-grey husks and long black awns. Utrecht is a spring wheat; sow it in April for harvest in September. ~20 seeds/g. ①

A=7g, $2.10 **B**=28g, $6.00 **C**=112g, $12.00

Yarrow See **4699** and **4802**-**4804**.

ZINNIA *Z. elegans*

Annual. Known as Youth and Old Age in the 1800s, this showy genus was named for German botany professor Johann Gottfried Zinn (1727-1759). One of the easiest to grow from seed and a favorite for bright color in Maine summers. Zinnia flower essence is used to bring out playfulness and lightheartedness.



Culture: Sow in a sunny spot after last frost, or start indoors for earlier blooms. They need good drainage and like heat. Jason Kafka says zinnias perform better in tunnels than in the field. With the extra heat they get so big that "they think they are in New Jersey." Cut when flowers are almost fully mature, just before pollen starts to form. Deadhead to continue production. Germinates 3–5 days at 80–85˚, more slowly at cooler temperatures. Grow on at 70˚ days, 60–65˚ at night. Temperatures below 60˚ delay flowering and may induce chlorosis. Space at 9–12". **~110 seeds/g** except where noted.

Benary's Giants (85 days) The most elegant giant dahlia-flowered zinnia. The densely petaled double flowers regularly exceed 4" across, showy yet extremely refined, borne on long stems perfect for cutting. Highlighted by the uniform petal patterns, colors are particularly bright. Holds better than most even under the stress of high heat and rainfall. Absolutely breathtaking in ideal conditions. 3–3½' plants. The zinnia of choice for market growers; on a par with State Fair Mix for home gardeners. ~120 seeds/g.

5700BL Benary's Giants Lime A trendy color in this superior series. ②

A=0.2g, $2.40 **B**=1g, $6.00 **C**=4g, $16.00

5702SP Benary's Giants Scarlet. ②

A=0.2g, $2.40 **B**=1g, $6.00 **C**=4g, $16.00

5704BW Benary's Giants Wine A very hot fuchsia. ②

A=0.2g, $2.40 **B**=1g, $6.00 **C**=4g, $16.00

5707MP Benary's Giants Mix From yellow, orange and white to scarlet, rose-pink, coral, deep red, lilac and purple. ②

A=0.2g, $2.40 **B**=1g, $6.00
C=4g, $16.00 **D**=20g, $68.00

5711CJ Cactus Bright Jewel Mix (75 days) Large ruffled zinnia blossoms resemble chrysanthemums. Profuse immense blooms in scarlet, orange, pink, yellow. 3' tall. ③

A=1g, $1.60 **B**=7g, $3.50
C=28g, $7.00 **D**=4oz, $15.00

5713CO California Giant Mix OG (85 days) Developed in 1926, California Giant (3–4' tall and bushy) blooms with masses of brilliant 4–6" double flowers in red, yellow, orange, lavender, maroon, violet and white. The flower shape is more open than **5714** Gold Medal Mix. Easy to grow and fantastic for cutflowers—the more you cut the more they bloom! ③

A=1g, $2.10 **B**=7g, $6.00 **C**=28g, $16.00

5714GM Gold Medal Mix A formula blend of cherry, orange, pink, purple, scarlet, white and yellow dahlia-flowered blossoms 4–5" across excellent for cutting. Flowers are flat-petaled, semi-double on 3½' plants. Bred by Bodger. ③

A=1g, $1.60 **B**=7g, $3.50 **C**=28g, $7.00 **D**=4oz, $16.00

5717NC Inca Waist-high stems bear striking 3–4" single blaze-orange blooms with showy little yellow doodads (disk florets) in the center. Long stems for cutting. Flowered fluorescently from July to October at Donna Dyrek's trial. ~120 seeds/g. ②

A=0.5g, $2.00 **B**=1.5g, $3.50 **C**=9g, $9.00

5720ZO Jim Baggett's Choice Mix Zinnia OG (85-90 days) While we have extolled Jim Baggett's vegetable breeding efforts in the past and carry several of his peas and a tomato, we had not considered his backyard avocation of breeding zinnias. Now we rectify that oversight. Baggett's Choice: both chosen by the OSU breeder—and a choice mix. The brilliantly hued large flowers on long stems come in an array of bright colors: oranges, yellows, red, magenta and pink with many petal forms, some cactus types and a few that look like they're related to Zowie. I can only imagine how Jim's yard must have looked filled with all this stunning beauty. Now our yards can look likewise. ① **NEW!**

A=25 seeds, $3.00 **B**=100 seeds, $9.00 **C**=400 seeds, $27.00

5725PM Pumila Mix (Cut & Come Again) Small 2' plants with flowers 2½–3" across. Wide range of colors includes orange, yellow, white, pink, lavender and scarlet. ~175 seeds/g. ②

A=1g, $1.60 **B**=7g, $3.50 **C**=28g, $7.00 **D**=4oz, $15.00

5728FL Scarlet Flame Even Gene, who doesn't like gaudy zinnias, was attracted to Scarlet Flame's elegant bright scarlet blooms. 4–5" blooms on 3' plants. Predates 1934. ③

A=1g, $1.90 **B**=7g, $4.60 **C**=28g, $13.00 **D**=4oz, $40.00

5731SF State Fair Mix (90 days) Old-fashioned variety bears a rich array of huge single and double 4–5" blooms on 30" plants. The blooms are much showier than those in the Gold Medal Mix with fully saturated colors that include red, magenta, purple, orange, lavender and pink. Our best-selling zinnia ranks fifth among all flowers. ~100 seeds/g. ②

A=0.5g, $1.60 **B**=2g, $4.00 **C**=12g, $8.00 **D**=4oz, $24.00

5738ZF Zowie!™ Yellow Flame (85 days) Nothing is staid about this 2006 AAS winner. Since 2010 when I first grew it, I have not been without it. Color pops right out of 3–4" semi-double blooms with glowing magenta centers and rose petals dipped in yellow at the tips. At 2–3' the well-branched plants are loaded with flowers of remarkable staying power. Whatever our tough climate dishes out, whether cold rain or steamy heat, the blooms stay clean and last long. Superb for bouquets too, with a vase life of up to 2 weeks. ~125 seeds/g. ⑤

A=0.1g, $3.70 **B**=0.4g, $12.00 **C**=2g, $42.00

5748JM Jazzy Mix *Z. haageana* If you thought the smaller Mexican-style *haageana* zinnias were always more subdued than their gaudier *elegans* cousins, guess again. This mix will jazz up your patch with an array of pink, orange, carmine and burgundy-red blooms tipped yellow to carmine. Masses of sparkling semi-doubled 1½" blossoms, some with a pompon effect, on slender stems cloaked in clean bright green leaves. ~650 seeds/g. ⑤

A=0.1g, $2.10 **B**=0.4g, $4.50
C=2g, $12.00 **D**=10g, $39.00

Reading the Fedco catalog is truly the highlight of my growing year. Thank you once again!
– Kristen Travis, West Jefferson, NC

DYE PLANTS

Susanne Grosjean, of the Wednesday Spinners group in Downeast Maine, says, "You need only three dye plants: indigo for blue, madder for red and weld for yellow. Three primary colors, all excellent fast dye plants."

5904CS Dyer's Coreopsis Mix *Coreopsis tinctoria* Annual. A beautiful native ornamental that provides a full palette of color from yellows and greens to rusts and browns—and even black, depending on the combination of plant parts and mordants. Large cosmos-like flowers in combinations of yellow, mahogany and red atop 2½' erect stems flourish in full sun and make excellent cuts. Low-maintenance and rugged. Good for less cultivated areas such as open spaces, roadsides and borders, competes well with grasses and reseeds easily. Tolerates drought. Direct seed outdoors after frost. ~2,200 seeds/g. ②

A=0.3g, $1.60 **B**=0.9g, $3.50 **C**=4.5g, $6.00

5906HO Hopi Black Dye Sunflower OG (90-100 days) *Helianthus annuus* Annual. A rare indigenous heirloom that the Hopis used as a natural dye source for coloring baskets purplish charcoal. "Blackest little seeds I've ever seen," says trialer Donna Dyrek. They will stain your hands purple when you collect them. Also edible and extremely easy to hull. 8' stalks with massive 12–18" main heads feature golden-yellow single petals around a dark purple-green center. Numerous side branches set all the way to the ground with smaller blossoms that make great cuts. Mound the soil around the base of the plants to prevent lodging. IR ✿ ①

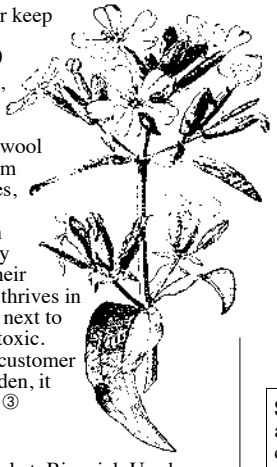
A=1g, $2.30

5911ND Indigo *Persicaria tinctoria* Japanese Indigo preferred by dyers in Maine. Formerly *Polygonum tinctorium*. A tender annual, indigo thrives in fertile soil and likes heat and humidity. Best started indoors 6–8 weeks before the last frost, transplanted out on 1' centers and kept moist. When the plants have grown 1–2' tall and bruised leaves turn navy blue, they are ready for a first harvest. If you cut the stems several nodes up from the ground, they will re-sprout and you can harvest the re-growth, perhaps several times more. Plan ahead and prepare the dye bath the same day as the harvest. ~250 seeds/g. ②

A=0.1g, $2.80 **B**=0.3g, $8.00 **C**=1.2g, $20.00 **D**=4.8g, $70.00

5913MD Madder *Rubia tinctorum* Known as Common Dyer's Madder. Perennial to Zone 5 if mulched heavily. An ancient and excellent source of red dye, native to southern Europe and Asia, the 4' plants have square stems, whorled leaves and pencil-slender roots. Roots go down 2'. Do not harvest them for three years. Then dig deep to get the tap roots, not the runner roots, and grind them to yield a wash- and light-fast red dye *par excellence*. Seed can take two weeks to germinate. Start inside in April in 70+° temperatures and transplant 12–18" apart in loose soil after danger of frost. Mulch deeply and keep beds well weeded. Plants send out runners that could become invasive so dig out the runners periodically or keep the area around the beds mowed. ~45s/g. ③

A=0.25g, $4.00 **B**=1g, $12.00 **C**=4g, $38.00



5920SW Soapwort *Saponaria officinalis* Perennial, Zones 3-9. Also known as Bouncing Bet. Bet is not a dye plant, but is included in the dye garden because its saponin-rich roots and leaves can be used to wash wool gently when some lanolin retention is desired. Museum conservators use it to wash delicate fabrics and textiles, especially of grease. This charming sweetly scented pink perennial is often seen around old homesteads in Maine. It has always been appreciated for the late-July colors of its dense clusters of 5-petaled flowers and their faint clove scent that attracts pollinators. The 3' plant thrives in moist, partially shady areas but should not be planted next to ponds with amphibians or fish since saponins can be toxic. Choose your planting spot carefully, because, as one customer warned, "Bet has taken me years to get out of my garden, it bounces everywhere." Stratify seed. ~600 seeds/g. ✿ ③

A=0.2g, $1.30 **B**=0.6g, $3.00
C=3g, $4.60 **D**=12g, $9.00

5928WD Weld *Reseda luteola* Known as Dyer's Rocket. Biennial. Used since antiquity, weld is said to be the best natural source of deep yellow dye, both wash-fast and light-fast. Leaves, flowers and seed capsules have the most color. When overdyed with woad, weld makes Lincoln Green, said to be the method Robin Hood and his band used for their characteristic gang color. A 4–5' member of mignonette's genus, it thrives in well-drained moderately fertile preferably alkaline soil. Self sows. Attractive to bees. ~4,760/g. ✿ ②

A=0.2g, $2.50 **B**=1g, $6.00 **C**=4g, $11.00

See also:
Hopi Red Dye Amaranth, p. 85

IR = Indigenous Royalty.
We pay royalties to indigenous peoples.
More on page 106.

Fedco's Packet Rack Program for Retailers

Portable cardboard packet racks suitable for all our A-size packets. The top slots hold about 4 packets of peas, beans or corn; all slots hold at least 10 packets of the other crops. Dimensions for the 28-slot rack are 14" deep, 20" wide, 62" high. For the 56-slot rack 14x30x64". Each collection has 28 or 56 varieties and either 5 or 10 packets of each variety.

5951 Popular Favorites 28 best-selling varieties.
20 vegetables, 4 herbs, 4 flowers; 6 organic.
A=5 of each with rack, $256.90 **B**=10 of each with rack, $478.80
C=5 of each without rack, $221.90 **D**=10 of each without rack, $443.80

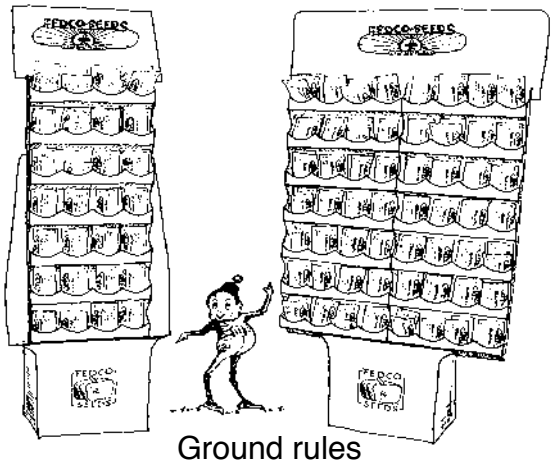
5952 Popular Favorites 56 best-selling varieties.
42 vegetables, 7 herbs, 7 flowers; 17 organic.
A=5 of each with rack, $499.90 **B**=10 of each with rack, $964.80
C=5 of each without rack, $464.90 **D**=10 of each without rack, $929.80

5953 All Certified Organic 28 best-selling organic varieties.
23 vegetables, 2 herbs, 3 flowers.
A=5 of each with rack, $302.50 **B**=10 of each with rack, $570.00
C=5 of each without rack, $267.50 **D**=10 of each without rack, $535.00

5954 All Certified Organic 56 best-selling organic varieties.
42 vegetables, 7 herbs, 7 flowers.
A=5 of each with rack, $572.00 **B**=10 of each with rack, $1109.00
C=5 of each without rack, $537.00 **D**=10 of each without rack, $1074.00

5955 All Heirlooms 28 heirloom varieties.
24 vegetables, 1 herb, 3 flowers; 10 organic.
A=5 of each with rack, $265.70 **B**=10 of each with rack, $496.40
C=5 of each without rack, $230.70 **D**=10 of each without rack, $461.40

5956 All Heirlooms 56 heirloom varieties.
44 vegetables, 4 herbs, 8 flowers; 20 organic.
A=5 of each with rack, $507.40 **B**=10 of each with rack, $979.80
C=5 of each without rack, $472.40 **D**=10 of each without rack, $944.80



Ground rules

- **Rack orders qualify for all regular volume discounts**, as do re-orders of $50 and over.
- Rack orders may be combined with individual packet orders to reach higher discount levels.
- Packets are our regular design. We will furnish samples on request.
- Pre-order, prepay.
- Free shipping on all orders.
- All re-orders will be advanced to the front of the line for fast service.
- No returns.
- Varieties our choice; no substitution requests.
- We will make substitutions if we run out of any items in our selection.
- Reorder requests will be honored until June 1.
- Retailers remove packets from racks by July 31; don't sell stale seed.
- No suggested retail. Determine the profit margin you need.
- Questions? email **questions@fedcoseeds.com**.

For a list of specific items in each rack, download from our website at fedcoseeds.com or write or call for a paper copy.

Seed Storage: Keep your seed alive by storing it properly! Humidity and heat are the enemies of seed longevity. Humidity causes the quickest deterioration. Ideal moisture content for most seed is only 10–12% so store at low relative humidity. Use a sealed jar in your freezer or refrigerator for optimum storage. Failing that, don't ever allow the sum of temperature (in Fahrenheit) plus relative humidity where seed is kept to exceed 100.

- Never store seed in a humid, warm or sunny spot.
- Don't ever leave it in a greenhouse or hoophouse, even for a few hours.

Stored properly, most seed will last for several years. A few seeds are good for only one year, such as onions, parsnips, parsley, chives, shiso, scorzonera, salsify, Batavian endive, licorice, pennyroyal, St Johnswort, liatris, delphinium, larkspur, perennial phlox, and any pelleted or hot-water treated seed. If in doubt, try germinating a sample in moist paper towels.

See page 94 for longevity chart for herb and flower seeds.

Name	item#	Botanical Name	ABP	height	uses	season	sow	start	temp	days	notes
Achillea	4802ff	*Achillea* spp.	P	18-24"	BDC	ES-F	DS DF TP	8-10	C	10–14	Lt
Ageratum	4811ff	*Ageratum houstonianum*	A	24"	BCD	ES-F	TP	6-8	W	4–6	◗S
Alyssum	4821	*Lobularia maritima*	A	2-4"	FBW	ES-F*	DS TP	5-6	55-70	8–14	◗S
Amaranth	4833ff	*A. cruentus, gangeticus*	A	3-6'	CNDE	MS-F	TP DS	6-7	W	10–14	◗Lt
Aster, New York	4849	*Symphyotrichum novi-belgii*	P	36-48"	B	LS-F*	TP	6-8	M	14–36	Ch2w
Aster, China	4851ff	*Callistephus chinensis*	A	12-30"	BC	ES-F	TP	12-14	W	10–21	◗
Baby's Breath	4861	*Gypsophila paniculata*	P	24-40"	BDC	MS-LS	TP DS	8-10	M	14–21	S
Bachelor's Button	4871ff	*Centaurea cyanus*	A	24-36"	BC	ES-F*	DW TP	8-9	C	7–14	◗Cv
Balloon Flower	4881	*Platycodon grandiflorus*	P	30-42"	CB	MS-LS	TP	6-8	M	15–30	S
Balsam	4883	*Impatiens balsamina*	A	24"	B	MS-F	DW		W	8–10	◗S
Bee Balm	4886	*Monarda didyma*	P	30"	BCD	MS-LS	DW TP	8-10	C/M	14–21	◗Lt
Begonia	4889	*Begonia* x *tuberhybrida*	TP/A	8-12"	BW	ES-LS	TP	12-14	W	14–28	●
Bells of Ireland	4896	*Moluccella laevis*	A	30"	DBN	MS-F	TP	6-8	C	12–21	◗S, Ch5d50°
Blazing Stars	4899	*Liatrus spicata*	P	18"	BCD	LS	DS TP	6-8	C	21–28	
Broom Corn	5437, pg 97	*Sorghum bicolor*	A	7-11'	D	LS-F	DW		W	7–10	
Bupleurum	4903	*Bupleurum rotundifolium*	A	2'	DCN	ES-F	TP	8-10	C	14–21	◗
Butterfly Weed	4906	*Asclepias tuberosa*	P	18-30"	BCN	ES-LS	DS DF		W	14–28	Ch4w34-40°
Calendula	4911ff	*Calendula officinalis*	A	18-24"	BDCE	ES-F*	DS TP DF	6-8	C	4–10	Cv
Campanula	4930	*Campanula carpatica*	P	6-8"	BGW	ES-F	DW TP	8-10	M	20–30	◗
Canary Creeper	4932	*Tropaeolum peregrinum*	A	8'	BV	LS-F	DW TP	6-8	C	7–14	◗Cv
Catmint, Persian	4937	*Nepeta mussinii*	P	12"	BG	Sp-MS	TP DS DF	6-8	C	10–14	
Celosia, Crested/Cockscomb	4943	*C. argentea cristata*	A	10"	BND	MS-LS	TP	4	W	10–14	
Celosia, Plume/Spike	4948ff	*C. a. plumosa, spicata*	A	3-6'	DCNB	LS	TP	8-10	W	10–14	
Cerinthe	4962	*C. major purpurescens*	A	12-18"	B	MS-F*	TP DW	6-8	W	7–14	
Chinese Forget-Me-Not	4965	*Cynoglossum amabile*	A	18"	B	MS-LS	DW TP	6	M	5–10	
Chinese Lantern	4968	*Physalis alkekengi*	P	24"	DNC	MS-F	TP DF	8	W	14–21	◗S, invasive
Cleome	4982ff	*Cleome hassleriana*	A	48"	BN	ES-LS	TP DW	4-6	W	7–14	Ch, S
Coleus	4992	*Plectranthus scutellar.*	TP/A	10-12"	WBN	MS-F	TP	8-10	M	10–14	●Lt
Columbine	4995ff	*Aquilegia* spp.	P	18-30"	B	Sp-ES	TP DS	6-8	W	14–28	●Lt,Ch3-4w
Coneflower, Prairie	5007	*Ratibida columnifera*	P	1-3'	B N	MS-LS	TP	6-8	W	7–42	Ch1w
Coreopsis	5012	*Coreopsis grandiflora*	P	18"	BC	ES-F	TP	8-10	C/M	7–21	◗Lt
Cosmos	5017ff	*Cosmos bipinnatus*	SSA	3-5'	BCS	MS-F	DW TP	2-4	W	7–10	Lt
Cosmos, Yellow	5039	*C. sulphureus*	A	2-3'	BC	MS-F	DW TP	2-4	W	7–10	
Dahlia	5045	*Dahlia* x *hybrida*	TP/A	12-14"	BC	MS-F	TP	6-8	W	7–14	◗
Daisy	5047ff	*Leucanthemum* x *superbum*	P	36"	BC	ES-MS	TP	6-8	W	7–14	
Datura	5050	*Datura metel*	TP/A	3-4'	BFW	ES-F	TP		C	21–42	Sc, Sk, Lt
Delphinium	5052ff	*Delphinium* x *cultorum*	P	3-6'	BCD	MS-LS	TP	10	M/W	14–21	Ch2-4w
Dianthus (Carnation, Pink)	5063ff	*Dianthus* spp.	A	12-20"	BCF	MS-LS	TP	8-10	M	7–14	
Didiscus	5067	*Trachymene coerulea*	A	24"	CB	MS-LS	DW TP	8	W	14–21	
Drumstick Flower	5072	*Craspedia globosa*	TP/A	1-3'	CDB	MS-LS	TP, DS	6-8	M	10–30	
Dyer's Coreopsis	5904, pg 101	*Coreopsis tinctoria*	SSA	30"	CB	MS-F	DS TP DF	6-8	C	4–10	S, rugged
Echinacea	4545ff, pg 81	*Echinacea* spp.	P	1-3'	BC	MS-LS	TP DW	8-10	W	10–21	◗
Flax, Blue	5079	*Linum perenne lewisii*	P	9-12"	B	ES-LS	DS TP DF	6-8	C	21–28	◗
Flowering Cabbage/Kale	5082ff	*Brassica oleracea*	A	8-18"	BNE	F-F*	DSTP	5-7	C	7–14	start Jun for Aug TP
Forget-Me-Not	5091	*Myosotis sylvatica*	B,P	6-12"	BCG	Sp-ES	DS	8-10	M	8–30	
Four O'Clock	5095	*Mirabilis jalapa*	A	24-36"	BF	ES-LS	TP DW	6-8	W	5–10	
Gaillardia	5097	*Gaillardia aristata*	P	24-36"	BC	MS-F	TP DW	6-8	W	14–21	Lt
Gazania	5100	*Gazania rigens*	A	8-10"	BW	MS-F	TP	6-8	W	12	Lt
Globe Amaranth	5102ff	*Gomphrena globosa*	A	2'	BD	MS-F*	TP	8-12	M	7–30	Dk, Ch5w
Godetia	5111	*Clarkia amoena*	A	20-30"	BC	MS-LS	TP	4	C/M	7–14	
Helen's Flower	5119	*Helenium autumnale*	P	4-5'	BC	LS-F	TP	6-8	M	14–21	
Heliopsis (False Sunflower)	5113	*H. scabra*	P	3-6'	BCS	MS-F	TP DW	10-12	M	14–21	
Heliotrope	5116	*Heliotropium arborescens*	TP/A	14-18"	FWBC	MS-F	TP	6-8	W	21–28	◗
Hibiscus	5120	*H. moscheutos*	P	2-3'	BN	LS-F	TP	8	W	10–30	PP
Hollyhock	5122ff	*Alcea rosea*	SSB	4-8'	BS	MS-LS	TP DF	8-9	WM	7–21	St
Honesty (Silver Dollar)	5132	*Lunaria annua*	B	3'	DN	LS-F	DS TP DF	6	M	14–21	◗
Impatiens	5142	*Impatiens walleriana*	TP/A	8-14"	WB	ES-F	TP	10	W	7–21	●Lt
Indigo, Japanese	5911, pg 101	*Polygonum tinctorium*	A	1-2'	dye	MS-F	TP	6-8	W	20–60	

ff=and following

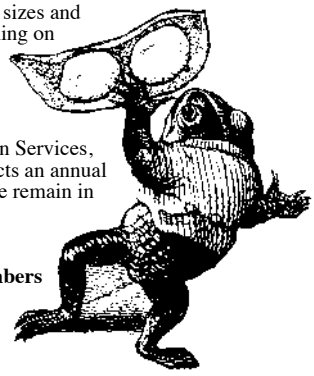
MORE FLOWERS AT GLANCE

Name	item#	Botanical Name	ABP	height	uses	season	sow	start	temp	days	notes
Jacob's Ladder	5144	*Polemonium caeruleum*	P	1'	B	ES	TP	8-10	M	20–25	◗
Job's Tears	5147	*Coix lacryma-jobi*	A	24-36"	DN	F	TP	6-8	C	7–14	
Joe Pye Weed	5150	*Eutrochium purpureum*	P	5-9'	BNC	LS-F	DS DF		M	14–21	S, St
Johnny-Jump-Up	5152	*Viola tricolor*	SSP	4-6"	EB	Sp-F*	DS DF		M	12–14	◗
Kiss-Me-over-the-Grdn	5154	*Polygonum orientale*	A	6-7'	NSB	MS-F	DS DF TP	4-6	W	14–20	Cv, St
Lace Flower	5157	*Orlaya grandiflora*	A	2-3'	BCD	MS-F	DW TP	4-5	M	12–16	
Larkspur	5160ff	*Consolida* spp.	A	24-36"	BCD	ES-F*	DS TP DF	6-8	C	14–28	◗Cv, Ch1w
Lavatera	5171	*Lavatera trimestris*	A	20-36"	BC	MS-F	DS TP	6-8	M	14–21	◗Cv
Lavender	4585ff, pg 82	*Lavandula angustifolia*	P	2-3'	BCDF	MS-F	TP	8-10	W	14–28	St, Lt
Lobelia	5180	*Lobelia erinus*	TP/A	4"	BW	ES-F	TP	6-8	M	14–20	◗S, Lt
Love-in-a-Mist	5184ff	*Nigella* spp.	A	15-24"	BD	MS-F	DS TP	6	M	10–14	
Love-Lies-Bleeding	4831ff, pg 85	*Amaranthus caudatus*	A	24-48"	BNDE	MS-F	TP	5-6	W	7–10	PP
Lupine	5195ff	*Lupinus polyphyllus*	P	36"	B	ES	DS TP DF	6-8	C/M	14–60	◗Sk, PP
Madder	5913, pg 101	*Rubia tinctorum*	P	3-4'	dye	F	TP DW	6-8	M	7–21	
Maltese Cross	5203	*Lychnis chalcedonica*	P	28-40"	BC	MS	TP	8-10	M	7–14	◗
Marigold	5211ff	*Tagetes* spp.	A	8-30"	BCW	MS-F	TP DW	3	W	5–8	Dk
Mignonette	5255	*Reseda odorata*	A	10-15"	F	ES-LS	DW		M	10–14	◗S, Lt
Millet, Foxtail	5257	*Setaria macrochaeta*	A	3-5'	BCDN	MS-LS	DW		M/W	10–21	S
Millet, Purple Majesty	5259	*Pennisetum glaucum*	A	3-5'	BCN	LS	TP	2-3	W	5-10	
Morning Glory	5271ff	*Ipomoea* spp.	A	8-12'	VS	ES-F	DW TP	3	W	10–21	Sc, Sk, PP
Nasturtium	5280ff	*Tropaeolum* spp.	A	12-16"	BEWC	ES-F	DW TP	3	M	10–14	Cv
Nicotiana	5300	*Nicotiana sylvestris*	A	4-6'	FN	MS-F	DS TP	6-8	W	7–14	Lt
Painted Tongue	5303	*Salpiglossis sinuata*	A	15"	BC	ES-F	TP	6-8	M	14–21	
Pansy	5305ff	*Viola* spp.	A	6-12"	BCW	Sp-ES	TP DF?	8-9	C	12–21	◗Dk
Pearly Everlasting	5314	*Anaphalis margaritacea*	P	18-24"	DCB	MS-F	DS TP	6-8	C	10–60	
Petunia	5321ff	*Petunia* x *hybrida*	A	4-6"	WBG	ES-F	TP	8	W	7–14	Lt
Phacelia	5331	*Phacelia tanacetifolia*	A	18-30"	B	MS-F	DS		C	7–12	
Phlox, annual	5335	*Phlox drummondii*	A	6-8"	BC	ES-F*	TP DS	8	C	7–14	◗
Phlox, perennial	5339	*P. paniculata*	P	36"	BC	LS-F	TP DF	10-12	C	21–30	◗St
Pincushion Flower	5341	*Scabiosa atropurpurea*	A	36"	BC	MS-F*	TP DW	4-5	M	14–21	
Poppy, Oriental	5345	*Papaver orientale*	P	16"	BND	Sp-ES	DS			7–14	Lt
Poppy, annual	5350ff	*Papaver* spp.	SSA	24-48"	BCND	MS-LS	DF DS			14–21	
Poppy, California	5381	*Eschscholzia californica*	A	8-12"	B	MS-LS	DS			14–21	
Queen Anne's Lace	5385	*Daucus carota*	B/A	36-50"	BC	MS-F	DS TP	4-5	C	12–21	
Red Hot Poker	5343	*Kniphofia uvaria*	P	32"	BCN	MS-LS	TP	8-10	M	21–28	PP
Rudbeckia, perennial	5393	*Rudbeckia fulgida*	P	24"	BC	MS-LS	TP	6-8	W	7–21	Lt
Rudbeckia, annual	5395ff	*R. hirta*	A	24-36"	BCN	ES-LS	TP DF?	6-10	W	14–21	
Sage, Gentian	5411	*Salvia patens*	A	30"	BC	MS-F	TP	12-14	M/W	14–21	S
Salvia	5406ff	*Salvia* spp.	TP/A	12-18"	BCD	MS-F	TP	10-12	M	14–21	S
Sea Oats, Northern	5423	*Chasmanthium latifolium*	P	2-5'	CD	LS-F	DW DF		M	7–21	
Snapdragon	5431	*Antirrhinum majus*	A	30-36"	BC	MS-F*	TP	8-10	C/M	7–14	◗Ch2w, Lt
Soapwort	5920, pg 101	*Saponaria officinalis*	P	36"	BGF	MS	TP	8-10	M	14–28	◗St
Statice	5444ff	*Limonium sinuatum*	A	24-30"	DCB	MS-F	TP	8-9	M/W	7–14	S
Stock	5475	*Matthiola incana*	A	12-18"	BC	ES-F*	DS TP	6-8	M	7–14	S
Strawflower	5483ff	*Xerochrysum bracteat.*	A	14-40"	DBC	MS-F	TP	7-8	W	7–14	Lt, S
Sunflower	5500ff	*Helianthus spp.*	SSA	2-12'	CNS	LS-F	DW TP	3-4	M/W	7–14	
Sweet Annie	5603	*Artemisia annua*	SSA	36-60"	FD	LS-F	DF TP	6-8	C	10–21	◗Lt, St
Sweet Pea, perennial	5611	*Lathyrus latifolius*	P	5-6'	CSV	MS-LS	DS		C	21–28	Sk, Cv
Sweet Pea, annual	5614ff	*L. odoratus*	A	1-6'	CFSV	MS-LS	DS TP	6-8	C	14–21	Sk, Cv
Sweet William	5061	*Dianthus barbatus*	SSB	18"	FBC	ES	DS TP	6-8	M	7–14	
Thyme, Creeping	5643	*Thymus serpyllum*	P	2-3"	FGB	MS-LS	DS TP DF	8-9	C	14–28	◗Lt
Tithonia	5647ff	*T. rotundifolia*	A	4-6'	BNS	MS-F	TP DW	6	W	7–14	
Verbena	5661ff	*Verbena* spp.	A	8", 48"	WBC	MS-F	TP	6-8	M	14–21	◗Lt, Ch3w
Weld	5928, pg 101	*Reseda luteola*	B	4-5'	dye	MS	TP	6-8	M	7–14	S, Lt
Yarrow, see Achillea											
Zinnia	5700ff	*Zinnia* spp.	A	20-42"	BC	MS-F	TP DW	3-4	W	7–14	

ABP: A=annual, B=biennial, P=perennial, SS=self-sowing, TP/A=tender perennial grown as annual.
height: typical height at maturity
uses: B=beds and borders, C=cutting, D=drying, dye=dye plant, E=edible, F=fragrance, G=ground cover, N=novel accent, S=screen, V=vining and climbing, W=windowbox, container
season: peak bloom time: Sp=spring, ES=early summer, MS=midsummer, LS=late summer, F=fall until frost, F*=fall after frost
sow: DS=direct sow in spring ASAP, DW=direct sow when soil has warmed or after danger of frost has passed, TP=transplant, DF=direct sow in fall
start: suggested number of weeks before transplanting
temp: suggested soil temperatures for good germination: C=cool, 60-65˚, M=moderate, 65-70˚, W=warm, 70-85˚
days: number of days to seedling emergence
notes: ◗=can grow in partial shade, ●=can grow in full shade or part shade. (The rest need sun.)
S=surface sow, Cv= cover seed, PP=use peat pots
Lt=needs light to germinate, Dk=needs darkness to germinate,
Sk=soak seed 12-24hrs, Sc=scarify seed with sandpaper or emery board,
St=stratify seed; place in moist soil and freeze or refrigerate or alternate between the fridge and freezer,
Ch=chill seed, sometimes specifies duration (d=days, w=weeks) and temperature

Organics in the Catalog

We list all available organic selections in this section. All variety descriptions (organic and otherwise), sizes and prices are in the main body of the catalog beginning on page 4. Sometimes we offer both conventional and certified-organic seed of the same variety.



Certified Organic Seed

Fedco Seeds is certified by MOFGA Certification Services, Maine's USDA-approved certifier. MCS conducts an annual inspection and audit of Fedco to ascertain that we remain in compliance with the national standards.

If you buy organic seed because you are a certified grower, save your invoice and your packet labels so you can keep track of lot numbers to maintain your own audit trail.

We continue to expand our range of suppliers and our offerings of certified-organic varieties.

Sustainably Grown Seed

All seed in our catalog offered as certified organic comes from certified farms. Even farms grossing under $5,000 that would otherwise be exempt from certification must get certified for us, as a processor, to label their product "certified organic."

Believing it essential to the democracy and self-reliance of our agricultural community and to our integrity as a seed supplier, we have painstakingly built our network of small seed growers over the past 30 years. Most of our growers use farm and seed revenues to supplement income from other jobs. Many gross less than $5,000 farming.

Some growers who practice sustainable farming methods conscientiously eschew certification for economical or ideological reasons. Thus, we are using the ecological label **ECO** after the variety name to describe uncertified seeds grown without pesticides, herbicides or chemical fertilizers in gardens and on farms that maintain an active soil-building program. Often this seed is as sustainably grown as the certified-organic seed. We hope you will continue to support both certified organic (**OG**) and **ECO** growers with your purchases.

We use the label **BD** for those varieties certified biodynamically grown. Some varieties have both biodynamic and organic certification and so will have the symbol **OG/BD.**

FEDCO SEEDS
Garden · Farm · Orchard

All open-pollinated unless otherwise noted. See the main body of the catalog, beginning on page 4, for descriptions, available sizes and prices, cultural information and sundry facts. For organic cover crops, flip to pp. 122–126.

STORE RACKS

5953 and **5954** See page 101.

ARTICHOKE pg 4

3608SO Imperial Star

BEANS pp 4–9

Bush Beans

205PO Provider
225BO Royal Burgundy
265RO Gold Rush
277DO Dragon Langerie
249MO Maxibel

Dry & Shell Beans

331CO Silver Cloud Cannellini
334BO Black Coco
385BO Black Turtle

Pole Beans

280NO Northeaster
281GO Golden Gate
371CO True Red Cranberry Pole

Fava Bean

299WO Windsor

Soybeans

489UO Sumo
491FO Shirofumi
493MO Giant Midori

BEETS pp 10–11

2109WO Early Wonder Tall Top
2121RO Red Ace F-1 hybrid
2137CO Chioggia Guardsmark
2187BO Bull's Blood
2128GO 3 Root Grex
2129LO Golden Grex
2144GO Golden Detroit
2149TO Touchstone Gold

BROCCOLI pp 11–12

3306SO Solstice F-1 hybrid
3325UO Umpqua
3316PO Purple Peacock GP

CARROTS pp 15–16

2090NO-2091PO Napoli F-1 hybrid
2092YO-2093AO Yaya F-1 hybrid
2051FO Nantes Fancy
2060RO Rumba
2076DO Danvers 126
2079KO Scarlet Keeper
2068AO Atomic Red

CELERY & CELERIAC pg 18

3621PO Par-Cel Cutting Celery
3624VO Ventura Celery
3630RO Redventure Celery
3634TO Tango Celery
3646DO Brilliant Celeriac

CORN pp 19–21

516AO Ashworth Yellow Sweet
544HO Top Hat Yellow Sweet
636LO Luther Hill White Sweet
652TO Tuxana White Sweet
675DO Dakota Black Popcorn
677BO Pennsylvania Dutch Butter Flavored Popcorn
680PO Painted Mountain
682CO Abenaki Calais Flint
688FO Floriani Red Flint
692HO Hopi Blue Flint

CUCUMBERS pp 22–23

1239LO Little Leaf H-19 Pickler
1313MO Marketmore 76 Slicer
1335LO Longfellow Slicer
1380SO Socrates F-1 hybrid
1394SO Suhyo Long
1396KO Shintokiwa
1311BO Boothby's Blonde
1318SO Silver Slicer
1375RO Richmond Green Apple

EGGPLANT pg 24

3684DO Diamond
3679AO Annina
3680AO Applegreen
3688RO Rosita
3691BO Rosa Bianca

FENNEL pp 24–25

4553PO Perfection Fennel
4567BO Bronze Fennel

GOURDS pg 25

1969SO Speckled Swan

GRAINS pg 26

4300OO Opopeo Amaranth
4312DO Duborskian Rice

GREENS pp 27–31

2993GO Greens Mix
3020SO Astro Arugula
3021CO Ice-Bred Arugula
3023AO Arugula
3038GO Golden Chard
3041RO Red Rhubarb Chard
3063FO Très Fine Maraîchère Olesh Endive
3075VO Chickendiva Endive
3056WO Wrinkled Crinkled Crumpled Cress
3148RO Purple Orach
3150AO Aurora Orach
3182GO Golden Purslane
3059WO Watercress

ASIAN GREENS pp 31–33

3221TO Tatsoi
3257CO Chinese Thick-Stem
3222BO Tokyo Bekana
3226MO Early Mizuna
3227RO Ruby Streaks
3229MO Mizspoona Selects GP
3236GO Golden Frill
3239LO Pink Lettucy Mustard GP
3245RO Red Giant Mustard
3247PO Osaka Purple Mustard
3253ZO Torziroh
3270PO Prize Choy Pac Choi

KALE pp 34–35

3449KO Scarlet Kale
3450VO Dwarf Blue Scotch
3457LO Rainbow Lacinato
3458TO Baltisk Rod Purpurkal
3465DO Dazzling Blue Dinosaur
3460FO Russian Frills
3462RO Red Russian
3464WO White Russian

LEEKS pg 36

2407KO King Richard Leek
2411SO King Sieg Leek
2425BO Bleu de Solaize Leek

LETTUCE pp 36–41

Mixes

2981LO Lettuce Mix
2983DO DeLuxe Lettuce Mix
2984FO Freedom Mix
2985RO Red Carpet Mix

Looseleaf

2712BO Black Seeded Simpson
2791TO Tango
2723SO Salad Bowl
2729RO Red Salad Bowl
2731CO Cracoviensis
2761RO Red Sails
2766YO Australian Yellow
2773HO Hyper Red Rumple Waved

2775FO New Red Fire
2786WO Red Tinged Winter
2789MO Merlot

Oakleaf

2788OO Oscarde
2738AO Antares
2764BO Blushed Butter Oaks
2763EO Elf Ears Oak
2781XO Merlox Red Oak
2784FO Flashy Green Butter Oak
2785TO Italienischer

Deer Tongue

2740DO Green Deer Tongue
2744RO Really Red Deer Tongue
2767DO Les Oreilles du Diable (Devil's Ears)
2836YO Red-Eared Butterheart

Lollo Rossa

2792RO Revolution
2793LO Dark Lollo Rossa
2795VO Lollo di Vino

Butterhead

2809CO Carmona
2814NO North Pole
2815PO Optima
2816MO Winter Marvel
2828PO Pirat
2831SO Speckled Amish
2834VO Sweet Valentine
2841NO Nancy

Romaine (Cos)

2852PO Pandero
2854BO Blushed Butter Cos
2855JO Jadeite
2856JO Mayan Jaguar
2861JO Jericho
2862DO Better Devil
2866PO Plato II
2874LO Olga
2877MO Marshall
2883CO Crisp Mint
2886WO Winter Wonderland

Batavian, Crisphead

2905DO Cardinale
2908TO Concept
2921NO Anuenue
2713GO Gildenstern
2714JO Jack Ice
2924CO Crispino

Specialty

2715LO Balady Aswan

MELONS pp 43–44

974MO Magnificenza F-1 hybrid
984PO Pride of Wisconsin
986MO Montreal Market
958AO Arava Galia F-1 hybrid
943FO Prescott Fond Blanc

OKRA pg 44

3695JO Cajun Jewel
3697GO Red Burgundy
3699BO Beck's Big Buck

ONIONS pp 45–47

2449YO New York Early
2474DO Clear Dawn
2487TO Talon F-1 hybrid
2489DO Dakota Tears
2445CO Cabernet F-1 hybrid
2490RO Rossa Di Milano
2441GO Glacier Rose Shallots
2443EO Ed's Red Shallots

PARSNIP pg 47

2306DO Andover

PEAS pp 48–49

758EO Emerald Archer shell
761GO Green Arrow shell
819GO Oregon Giant shell
822BO Blizzard snow
883AO Sugar Ann snap
884MO Mega snap
889CO Cascadia snap
893SO Sugarsnap

PEPPERS pp 50–53

Sweet Peppers

3704PO Peacework
3713NO King of the North
3725SO Staddon's Select
3706GO Gilboa
3723PO Purple Beauty
3735CO Chocolate
3738KO Klari Baby Cheese
3740SO Sweet Pimiento
3741PO Amish Pimiento
3744TO Tangerine Pimiento
3757CO Carmen F-1 hybrid
3762JO Jimmy Nardello's
3764AO Apple
3773DO Odessa Market
3759BO Boldog
3776FO Feher Ozon

Hot Peppers

3845PO Hot Portugal
3816BO Czech Black
3853BO Bulgarian Carrot Chile
3856HO Ho Chi Minh
3825CO Carrot Bomb
3831JO Jaluv an Attitude
3841DO Hidalgo
3866MO Matchbox
3805VO Beaver Dam
3849FO Fish
3860TO Thai Hot
3870HO Hinkelhatz

PUMPKINS pp 54–55

1718WO Winter Luxury
1720NO New England Pie
1723LO Long Pie
1743GO Good Egg Godiva
1745XO Bellatrix
1752HO Howden

RADISHES pp 56–57

2245PO Pearl
2253PO Plum Purple
2269MO Misato Rose
2268GO Green Meat

SPINACH pg 68

2541BO Bloomsdale
2558WO Winter Bloomsdale

SQUASH: SUMMER & ZUKES pp 59–60

1539CO Early Summer Yellow
1577YO Y-Star F-1 hybrid
1450SO Cassia F-1 hybrid
1457CO Costata Romanesca

SQUASH: WINTER pp 60–64

1606SO Sweet REBA
1611ZO Zeppelin Delicata
1630DO Uncle David's Dakota Dessert
1683BO Burpee's Butterbush
1688WO Waltham Butternut
1665LO Lower Salmon River
1672GO Galeux d'Eysines
1676CO Candy Roaster
1693SO Seminole

TOMATILLOS pg 65

4012BO Purple Blush
4005MO Aunt Molly's Ground Cherry

TOMATOES pp 65–72

4149MO Heirloom Mix

Red & Pink Slicers

4018LO Glacier
4025SO Oregon Spring
4038CO Cosmonaut Volkov
4049RO Pruden's Purple
4050ZO Bizhiki
4052KO KC 146
4055TO Rutgers Original
4056RO Rutgers 250
4067RO Rose de Berne
4069GO German Johnson
4071SO Soldacki
4075BO Pink Brandywine
4081MO Mark Twain
4083WO Weisnicht's Ukrainian
4087TO Tiffen Mennonite
4238LO Luci 2103 F-1 hybrid
4239AO Arbason F-1 hybrid

Colorful Slicers

4041BO Pink Berkeley Tie-Dye
4045PO Garden Peach
4053PO Black Prince
4054GO Goldie
4058GO Cherokee Green
4057GO Green Zebra
4059CO Cherokee Purple
4060BO Paul Robeson
4061KO Black Krim
4065JO Golden Jubilee
4076YO Yellow Brandywine
4077NO Pineapple
4080AO Aunt Ruby's German Green

Paste Tomatoes

4123MO Mr. Fumarole
4125HO Heinz 2653
4131GO Grandma Mary's
4133LO Bellstar
4135PO Opalka
4137NO Orange Banana
4138RO Speckled Roman
4140AO Amish Paste
4141HO Hog Heart

Small Tomatoes

4108BO Be My Baby
4031AO Aosta Valley
4051JO Jaune de Flammé
4115BO Black Cherry
4118PO Principe Borghese
4119VO Peacevine
4121DO Green Doctors Frosted
4122FO Fargo Yellow Pear
4252SO Esterina F-1 hybrid
4253JO Jasper F-1 hybrid
4265CO Cherry Bomb F-1 hybrid

TURNIP pg 73

2379WO Purple Top White Globe

WATERMELONS pp 74–75

1003BO Blacktail Mountain
1028SO Sugar Baby
1035DO Sweet Dakota Rose
1063CO Crimson Sweet
1072MO Moon and Stars
1021MO Early Moonbeam
1067GO Orangeglo

HERBS pp 79–84

4407AO Anise Hyssop
4409RO Arnica Chamissonis
4411WO Ashwagandha
4412LO Astragalus
4415WO Sweet Basil
4453LO Lime Basil
4468KO Kapoor Tulsi Basil
4481WO Wild Bergamot
4491BO Borage
3045CO Chervil
4513CO Chives
4517RO Caribe Cilantro
4518SO Santo Cilantro
4531BO Bouquet Dill
4547CO Echinacea purpurea
4550EO Elecampane
4560FO Fennel
4572FO Feverfew
4585LO Lavender
4619MO Marshmallow
4630TO Milk Thistle
4640MO Motherwort
4644SO Stinging Nettle
4649ZO Zaatar Oregano
3169KO Krausa Parsley
3170DO Dark Green Italian Parsley
4657RO Rosemary
4682MO Skullcap
4690VO Valerian
4692BO Blue Vervain

FLOWERS & ORNAMENTALS pp 85–101

5804BO Beneficials Mix
4832HO Hot Biscuits Amaranth
4835HO Hopi Red Dye Amaranth
4837EO Elephant Head Amaranth
4852CO Crego Mix China Aster
4911FO Flashback Calendula
4916MO Maya Orange Calendula
4925RO Resina Calendula
4927LO Solar Flashback Calendula
4929ZO Zeolights Calendula
4950RO Ruby Parfait Celosia
5017CO Cupcakes
5045HO Harlequin Mix Dahlia
5050DO Purple Ballerina Datura
5111GO Grace Mix Godetia
5147JO Job's Tears
5157WO White Finch Laceflower
5277KO Kniola's Purple Morning Glory
5331PO Phacelia
5350EO Elka Poppy
5351ZO Ziar Breadseed Poppy
5366QO Drama Queen Poppy
5371RO Fluffy Ruffles Poppy
5377LO Large Lavender Poppy
5378SO Scarlet Peony Poppy
5385QO Dara Queen Anne's Lace
5423SO Northern Sea Oats
5500AO Autumn Beauty Mix Sunflower
5539SO Selma Suns Sunflower
5542SO Soraya Sunflower
5603AO Sweet Annie
5634PO Painted Lady Sweet Pea
4322BO Black Eagle Wheat
4324UO Utrecht Spring Wheat
5713GO California Giants Zinnia
5720ZO Jim Baggett's Choice Mix
5906HO Hopi Black Dye Sunflower

Royalties for Breeders and Keepers of Seed

Breeder Royalties

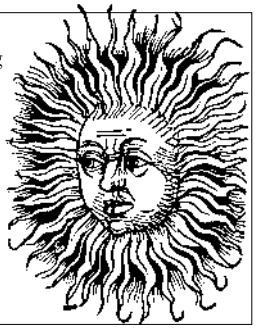
For many years Fedco has been proactive in paying royalties to the current generation of "backyard breeders" whose varieties we purchase from other sources. We recognize the value of their work and appreciate that they are keeping these seeds in the Commons, available to all.

The letters **BR** after a variety description indicate that we pay the independent breeder royalties because he or she is not receiving income from our purchase of the seed. Last year these royalties totaled $3150.

The symbol Ω after a description indicates independently bred varieties that we purchase directly from the breeder. A bit more appears in the sidebar on age 36.

I'm delighted to finally buy a membership! Fedco has long been a huge inspiration and a beacon of right livelihood in business. To the beautiful green earth, thank you for being!
– Linda Frey, Carlton, PA

Update from Our Solar Panels



Our 54.56 kW solar array began producing electricity on January 3, 2017. To date it has produced 121.453 MWh of electricity, and we have kept 85 tons of CO_2 out of the atmosphere.

Our peak production in 2018 was in May when we generated 8,893 KWh; in contrast, the OGS warehouse used 1,997 KWh that month.

Once again we thank our member donors and lenders who made this expensive project feasible for us.

Indigenous Royalties

Last year we began paying royalties in recognition of the native breeders and Seed Keepers of the past, whose varieties have endured and continue to sustain us here on Turtle Island. We are indebted to those keen eyes, practiced hands and seed relationships, so often overlooked. Fedco's catalog is rife with references to probable native provenances.

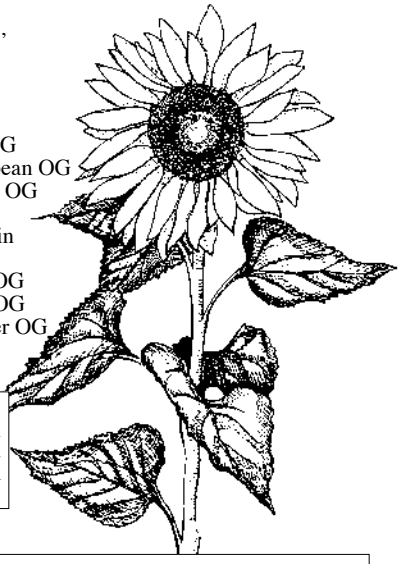
We will continue to pay royalties, this year for 11 varieties, labeled **IR**, that either hold a Wabanaki (from this bioregion) story or that have a tribal designation in the name. These royalties will go to the Nibezun Project here in Maine. According to nibezun.org,

> the Nibezun Project will acquire, protect, and steward an endangered parcel of culturally significant land on the Penobscot River in Passadumkeag, Maine. This 85 acre parcel provides the only land access to the Penobscot Nation's treasured Olamon Island and is an historic and current ceremonial ground and gathering place. In addition to the land's palpable heritage, natural beauty and abundant wildlife, existing facilities on site will provide an ideal home for the Coalition's diverse programming, supporting its mission of preservation, cultural exchange and educational outreach. By working with this sacred land and its cultural traditions, the Nibezun Project aims to foster the Seven Seeds of Healing both within the Wabanaki community and beyond, and in so doing become a catalyst to heal the greater environment and recreate the symbiotic relationship with Mother Earth enjoyed by the ancestors of the Wabanaki People.

Last year's royalties came to $561. With an additional $1449 donated by customers, the check to the Nibezun Project totaled just over $2,000.

Royalties from the following varieties, labeled **IR** in the catalog descriptions, will support Nibezun:

6	**328**	Vermont Cranberry bean
6	**338**	Marfax dry bean
6	**344**	Jacob's Cattle dry bean OG
8	**371**	True Red Cranberry dry bean OG
21	**682**	Abenaki Calais Flint corn OG
21	**692**	Hopi Blue corn OG
55	**1748**	Connecticut Field pumpkin
64	**1693**	Seminole squash OG
68	**4059**	Cherokee Purple tomato OG
85	**4835**	Hopi Red Dye amaranth OG
101	**5906**	Hopi Black Dye sunflower OG



Support Nibezun with Your Refund
You can choose to donate some or all of your refund to Nibezun when you order seeds, either on the paper form or online.

Join our Cooperative as a Consumer Member!

Our 1,149 consumer members and 82 worker members are the foundation of our strength and the fount of our support. Here's your chance to join the Fedco cooperative and help us continue far into the future. We have a lot of work ahead helping build a sustainable seed system.

We ask for a $100 membership equity, refundable at any time upon request. ($105 to join online by credit card.) If this would be a hardship, there is a $25 option. Please note that membership is by household (only one membership per household please) or by farm or organization.

Benefits include:

- 1% discount on orders from all branches.
- An invitation to our Annual Meeting.
- An opportunity to vote on proposed bylaw changes.
- A chance to vote for and serve on our Board of Directors.
- The satisfaction of owning a small part of a successful new-wave coop.

Thank you for your support!

Yes, I want to join Fedco as a consumer member-owner!

Enclosed is a check for my refundable membership deposit of $100.
Please make membership certificate out to:

Name_____

Address _____

City_____ St_____ Zip _____

Customer # (if you know it)_____

Email address_____

PO Box 520, Clinton, ME 04927

OSSI and the Four Seed Freedoms

Fedco is proud to be among the 48 seed-company partners of the Open Source Seed Initiative (OSSI), an effort by a consortium of seedsfolks, farmer-breeders, academics and others to keep as many seed varieties as possible in the public domain, unfettered by privatizing restrictions. (See CR Lawn's essay "In Defense of a Seed Commons" from our 2016 catalog at fedcoseeds.com/seeds/seed_ethics.htm)

The OSSI Pledge

OSSI is signing up as many breeders and seed companies as possible to pledge to keep as many varieties in the Commons as possible. Fedco currently carries 43 OSSI-pledged varieties designated by the OSSI logo in our catalog. We ask each buyer of these OSSI-pledged seeds to uphold this open-source agreement:

> You have the freedom to use these OSSI-pledged seeds in any way you choose. In return, you pledge not to restrict others' use of these seeds or their derivatives by patents or other means, and to include this Pledge with any transfer of these seeds or their derivatives.

The Four Seed Freedoms

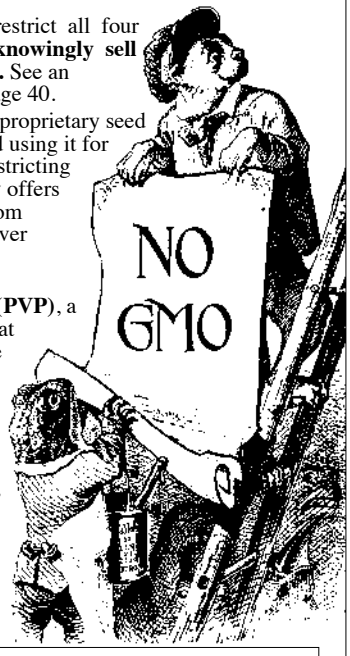
OSSI opposes intellectual property (IP) provisions that restrict what OSSI has identified as the four seed freedoms:

1. The freedom to save or grow seed for replanting or any other purpose.
2. The freedom to share, trade, or sell seed to others.
3. The freedom to trial and study seed and to share or publish information about it.
4. The freedom to select or adapt the seed, make crosses with it, or use it to breed new lines and varieties.

Fedco's Commitment to Transparency and Seed Savers' Rights

Some seed varieties have intellectual property (IP) restrictions that we must agree to in order to offer the seeds. These restrictions challenge some or all of the four seed freedoms above. Such restrictions come in several forms:

- Utility patents or trait patents restrict all four seed freedoms. **Fedco does not knowingly sell trait- or utility-patented varieties.** See an explanation of our opposition on page 40.
- Licenses that allow us to produce proprietary seed in exchange for royalties, but forbid using it for selection and breeding purposes, restricting the fourth freedom. Fedco currently offers two such varieties, under license from Cornell. These are **1318** (pg 23) Silver Slicer cucumber and **3704** (pg 50) Peacework pepper.
- The Plant Variety Protection Act (**PVP**), a form of limited patent protection that restricts the freedom to sell or share with others, but allows seed saving for own use or breeding purposes. We label all the PVPs in their descriptions.



Although a few multinationals are aggressively pursuing protection of IP, many other companies are labeling IP only to guard against having their breeding appropriated by those bigger companies, and have no current intentions of litigating against home gardeners for saving seed.

Sell Seeds for a Green Fundraiser!

Tired of candy sales and want a fundraiser with a wholesome message?

We choose 25 popular easy-to-grow varieties and customize an order form for each participating group. We offer two options: a regular selection or an all-organic listing. Choose one or both, and take orders from your community. We split the take with your school group, PTA or nonprofit, based on the number of packets you sell. *You must make a commitment to sell at least 100 packets*. **The application deadline (intent to participate) is March 15 and the order deadline is April 30.**

Visit fedcoseeds.com/seeds/fundraiser.htm for info.

We will work with any school, PTA or other *nonprofit* group. Contact Alicia Letteney and Sara Carter by email at *fundraiser@fedcoseeds.com*. Please, no calls.

Further Seed Industry Consolidation

They're calling it "seed consolidation's Big Finale"—the reshuffling over the past three years has reduced the "Big Six" multinationals to only four.

The top news is that Monsanto and Bayer merger has gone through. Last May the U.S. Justice Department antitrust regulators granted permission for the merger after the two companies agreed to spin off $9 billion worth of assets: Bayer sold its seed and herbicide businesses to the German chemical company BASF. Then in June, Bayer decided to dump the Monsanto name and call the new company Bayer. With the recent massive judgement in California against Monsanto's Roundup as causative in a groundskeeper's cancer, the Monsanto name is a liability. So, instead of "Millions against Monsanto" we can expect "Billions against Bayer."

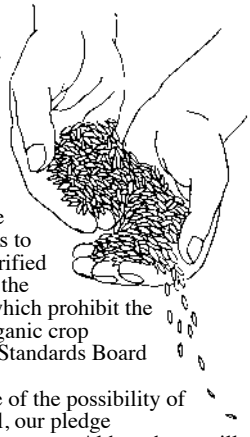
Two other recent mergers lurk under the shadow of Monsato-Bayer: Dow and DuPont combined assets and are now known as Corteva Agriscience, and Syngenta is now owned by ChemChina, on its way to being the world's largest industrial chemical company.

ETC Group (Erosion, Technology and Concentration), which has long monitored the Gene Giants, focusing on socioeconomic and ecological issues surrounding the new technologies that only these kinds of corporations can fund, says:

> Concentration in corporate power is the defining feature of today's global economy, with profound implications for livelihoods, well-being, the environment and human rights. Today many of the same large corporations are touting the use of new technologies—including genomics, nanotechnology and synthetic biology—to transform biomass into high-value products or to manufacture materials "from the bottom up." They are moving from being "gene giants" to "matter moguls."

We highly recommend ETC's website: www.etcgroup.org and their "just say know" campaign as an ally in keeping informed to better stand against such dominion so we can monitor the mutinationals' control and appraise who benefits, tracking and assessing the technology and strengthening our diversity.

Fedco Does Not Knowingly Carry Genetically Engineered Seeds



At our 1996 Annual Meeting we voted unanimously not to knowingly offer for sale any genetically engineered variety because the new gene technologies pose unacceptable risks to the environment. In 1999 we affirmed and clarified that position and will follow the guidelines of the Organic Materials Review Institute (OMRI) which prohibit the use of genetically engineered organisms in organic crop production. OMRI uses the National Organic Standards Board (NOSB) definition of genetic engineering.

Please note the word "knowingly." Because of the possibility of contamination, over which we have no control, our pledge necessarily stops short of being an absolute guarantee. Although we will not sell any variety represented to us as genetically engineered, and we refuse any lot of seed that test positive for GMO content at the lowest detection limit of 0.01%, we will not be held legally responsible if any of our seed tests positive for genetically modified organisms. We apologize for having to split legal hairs, but we all share the reality of genetic drift.

We test beet, chard and sweet corn seed for transgenic contamination. See page 19 for more information.

For our 2006 statement on why we do not purchase seed from Monsanto or any of its subsidiaries, see: fedcoseeds.com/seeds/monsanto.htm

Fedco Seeds guarantees that all items we offer are fully satisfactory. If you are dissatisfied because of any product defect, we will either replace the item or refund the purchase price.

Limitation of Liability

Because good results depend upon weather, soil and cultural practices over which we have no control, we limit our liability in all instances to the purchase price of the seeds, as is customary in the seed trade. The liability of Fedco Seeds for breach of warranty, or any loss or damages arising out of the purchase or use of our products, including loss or damages resulting from any negligence whatsoever on our part, or strict liability in tort, shall be limited to the purchase price. By acceptance of the merchandise, the buyer acknowledges that the limitations and disclaimers herein described are conditions of sale, and that they constitute the entire agreement between the parties regarding any warranty or liability.

Claims for errors in your order must be presented within 30 days of receipt of your order. Claims for defects in Fedco Seeds' products should be presented to Fedco Seeds as soon as possible after discovery. Failure to assert claims within 30 days after discovery renders this warranty null and void.

Directions for ordering SEEDS

Directions daunting? Order online: fedcoseeds.com

- Please use a current catalog. Prices, item numbers and availability change! Need a current catalog? Call (207) 426-9900.
- Order only seeds **200-5999** on Seeds form, *no potatoes, cover crops, supplies or books*. Potatoes and OGS forms are after the Seeds form.
- You may send in separate forms from more than one division at the same time and pay with one check. Figure totals for each division on its proper form, then add division totals to figure grand total.
- Please keep a copy of your order and send us the original.
- Write the size letter for the packet size, not the weight.
- Please **subtotal each column** and total your order even if paying by credit card.
- We will charge your credit card when we receive your order. We will send you a bill or a refund for any adjustments as each order is completed.

Delivery

UPS/Priority Mail

- **Free shipping for pickups and seed orders $30 and up (items 200-5999).**
- We ship via UPS ground or USPS Priority Mail; our choice, based on weight.
- We pull & ship orders based on the date received. No special rush service.
- If you'd like us to hold your order for a later shipping date, please attach a note to your order form or comment on your online order.
- We ship to Canada. Online orders only.

Ordering Schedule

- **Peak season**: Jan–March 22: Orders accepted online or by mail.
- **Off-Peak season**: March 23–Oct 31: For fastest service we encourage online ordering.
- **Hiatus**: November 1: No orders accepted till new catalog is out; website ordering shut down.

Shipping Schedule

- **We begin daily shipping of seed orders on January 2.**
- Jan–April: Daily shipping.
- May–Oct: Twice weekly shipping. For quickest turnaround time order online by noon Monday or Wednesday.

Pickup Come to our warehouse in Clinton. See the map on page 115.

Seeds: January-October We will send a confirmation email or postcard with directions and your order number when your order is ready to pick up (within 1 week of receipt of order). Pick up at our warehouse, **Tues, Weds, & Thurs only**, 9:00–3:00. Sorry, no other days, except during the Tree Sale.

Tree Sale pickup Friday & Saturday, Apr. 26-27 (preorder customers only), and May 3-4 (Public Tree Sale) 9:00-3:00 each day. Order by April 17. *Note:* Seed orders will be at the Seeds warehouse on Bellsqueeze Rd, not at Trees' warehouse.

Group orders

We will pull and package each group member's order separately and ship all to *one address*. Discounts apply to one division, combined totals. You may not combine orders from different divisions to qualify for a higher discount.

We accept group orders **online**. Group coordinators can find details at our website. Go to the Seeds page and click on Group Ordering.

Or use the **mail** and bundle individual orders with a summary form for each division with address information and totals. Please keep copies.

How to prepare a summary form:

- Attach a separate summary page for **each division** (Seeds, Potatoes, OGS, Trees). Use an order form with no items on it, fill in name and address blanks and totals information. See example.
- A summary form without individual totals is acceptable.
- Please use **one method of payment** for each division order. You may combine totals for all divisions and send one check. If paying by credit card, please put number and expiration date on summary form for each division.
- Figure all discounts from subtotal. See example.
- We treat all add-ons as additional orders.

Group coordinators' responsibilities:

- Collect individual orders and payments from group members.
- Make sure each item of each individual order is on proper form (for example, no potatoes on Seeds form); make necessary corrections.
- Add up order subtotals for each division. Keep track of individual payments and settle with group members after the final shipment.
- Bundle orders for each division with a summary and one payment and send to us.
- Receive and distribute back-ordered items.
- Send us corrections for any errors in group order.

Fedco Seeds' substitution policy

We ask when you order whether you will accept substitutions. *We will make substitutions where necessary* rather than out-of-stock you, *unless you decline substitutions on the form*. If you don't specify, we sub.

- **If you ordered a snow pea, we will substitute a snow pea.** We will choose a very similar snow pea of comparable maturity date, height, color if available, but will substitute any other snow pea we have if necessary. **If we have no other snow peas, we will *not* substitute a shell pea, bean or anything else.**
- We will substitute hybrids for open-pollinated varieties only when that is our sole alternative.
- If we have to sub a more expensive variety, we won't charge you more.
- If we run out of organically produced seed we will substitute high-quality conventional seed for the same variety unless you instruct us otherwise.
- If we run out of conventional seed we may substitute organically produced seed for the same variety, but charge you only the conventional seed cost.
- We are sorry that we cannot honor specific substitution requests.

Discounts See the order form on the facing page.
Additional orders over $50 qualify for prior (or largest) discount, if they are to the same address.

Shipping Charges

Seed orders under $30 add $6 shipping charge. This charge applies regardless of how much you ordered from other divisions. We treat **add-ons as separate orders subject to the $6 charge.**

No Returns

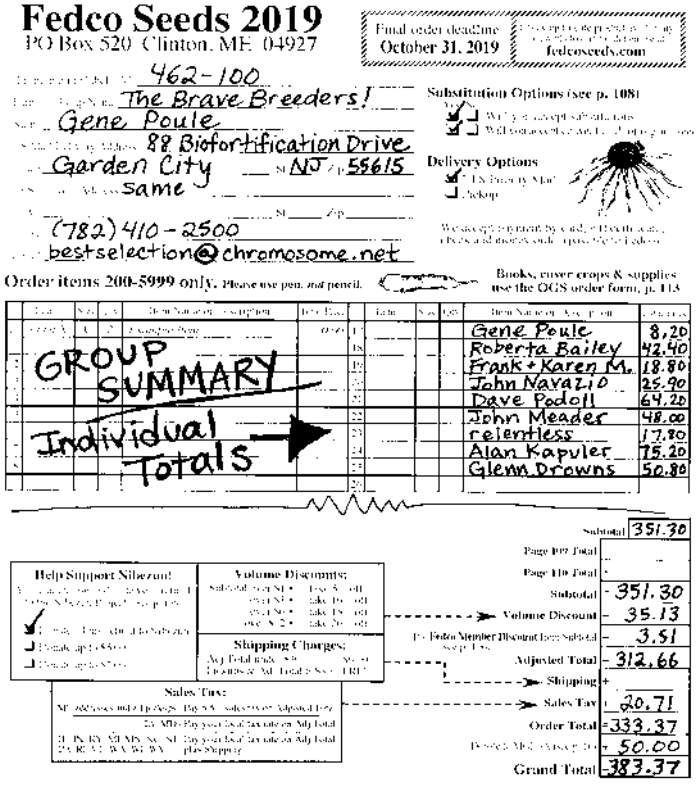
No returns or exchanges of seed. If you bought it, it's yours! See limited guarantee (page 107) for defective products only.

Sales Tax

Orders shipped to Maine addresses and all pickup customers pay 5.5% sales tax on **all** seed. Because of the Supreme Court decision last June, we must collect local taxes in states that require us to do so. States affected are listed on the order form. Farms and retailers: please send us a copy of your state resale certificate or farm exemption. Otherwise we must charge sales tax.

Backorders are items not available at time of shipment that come in later. We try to minimize them.

- For orders with only one A-size or B-size packet on backorder who accept substitutions, we will substitute rather than backorder those items.
- Early orders have the most backorders.
- We ship backordered items needing an early start ASAP after we receive them. We batch *other* backordered items to reduce our shipping costs.
- We fill orders received after March 8 from available remaining stock. No backorders.
- We will ship all backorders by March 22. Please contact us if you are still missing any backorders or have not received a refund by April 5.



Fedco Seeds 2019

PO Box 520 Clinton, ME 04927

Final order deadline: **October 31, 2019**

Check up-to-date product availability, view photos, and order online at **fedcoseeds.com**.

(From mailing label) CC-_____

Farm or Group Name _____

Name _____

US Mail Delivery Address _____

Town _____ St _____ Zip _____

UPS Delivery Address _____

Town _____ St _____ Zip _____

Phone _____

Email _____

Substitution Options (see p. 108):

Yes No

❑ ❑ Will you accept substitutions?

❑ ❑ Will you accept conventional for organic seed?

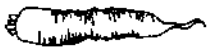
Delivery Options:

❑ UPS/Priority Mail

❑ Pickup

We accept payment by card, gift certificate, check and money order (payable to Fedco).

Order items 200-5999 only. Please use pen, *not* pencil.



Books, cover crops & supplies use the OGS order form, p. 113

VEGETABLE, HERB & FLOWER SEEDS

	Item #	Size	Qty	Item Name or Description	Total Price		Item #	Size	Qty	Item Name or Description	Total Price
ex	*3993EX*	*A*	*2*	*Example Item*	*0.00*	17					
1						18					
2						19					
3						20					
4						21					
5						22					
6						23					
7						24					
8						25					
9						26					
10						27					
11						28					
12						29					
13						30					
14						31					
15						32					
16						33					

Subtotal _____ **Subtotal** _____

Help Support Nibezun!

You can choose to donate your refund to the Nibezun Project. (See p. 106)

❑ Donate all my refund to Nibezun

❑ Donate up to $5.00

❑ Donate up to $2.00

Volume Discounts:

Subtotal over $100 take 5% off
over $300 take 10% off
over $600 take 15% off
over $1200 take 20% off

Shipping Charges:

Adj Total under $30 $6.00
Pickups & Adj Total ≥ $30 FREE

Sales Tax:

ME addresses and all pickups - Pay 5.5% sales tax on Adjusted Total.

IA, MD - Pay your local tax rate on Adj Total.

IL, IN, KY, MI, MN, NC, NJ - Pay your local tax rate on Adj Total plus Shipping.
PA, RI, VT, WA, WI, WV

Page 109 Total	
Page 110 Total	+
Subtotal	=
Volume Discount	−
1% Fedco Member Discount from Subtotal (see p. 106)	−
Adjusted Total	=
Shipping	+
Sales Tax	+
Order Total	=
Donate to MOFGA (see p. 16)	+
Grand Total	=

We accept Visa, MasterCard, American Express and Discover Card Exp. Date

Fedco Seeds 2019: items 200-5999, pages 4-101 only

	Item #	Size	Qty	Item Name or Description	Total Price		Item #	Size	Qty	Item Name or Description	Total Price
34						82					
35						83					
36						84					
37						85					
38						86					
39						87					
40						88					
41						89					
42						90					
43						91					
44						92					
45						93					
46						94					
47						95					
48						96					
49						97					
50						98					
51						99					
52						100					
53						101					
54						102					
55						103					
56						104					
57						105					
58						106					
59						107					
60						108					
61						109					
62						110					
63						111					
64						112					
65						113					
66						114					
67						115					
68						116					
69						117					
70						118					
71						119					
72						120					
73						121					
74						122					
75						123					
76						124					
77						125					
78						126					
79						127					
80						128					
81						129					

Subtotal | **Subtotal**

If you need more space, you may photocopy this form, download copies from our website at fedcoseeds.com/requests.htm or call 207-426-9900 for another copy.

Page 110 Total

Fedco Seeds
PO Box 520
Clinton, ME 04927-0520

Presorted Standard
U.S. Postage
PAID
Fedco Seeds Inc.

change service requested

Fedco **Tree Sale** April 26 & 27 for preorders
May 3 & 4 Public Sale

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